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## Michael Sendivogius: An alchemist and Austrian-Polish double agent of the beginning 17<sup>th</sup> century

### (1) Historical context

Looking at the scientific relations between Austria and Poland in a time of permanent political change after decades of stagnation I want to remind the audience of an outstanding person around the early modern times, who played an extraordinary role not only in politics but also in science — or (more correctly) in the art of alchemy — at that time: The man we are talking about is the alchemist and double agent Michael Sendivogius, who managed to serve three monarchs at a time: the Austrian Emperor, the Polish King, and Madame Alchemia.

I actually came about Sendivogius by studying a manuscript of the Austrian National Library with one of my students: the MS 11.352. This script was written by an alchemist in Vienna around 1615.<sup>1</sup> A note in the margin — which might have been written in the lifetime of Sendivogius and which comments on a recipe — says: “*Der Sendivogius hat diesen Spiritum auf ein weiß christallinisch Saturni gemacht.*” Whatever may be meant by that — it’s a fact that Sendivogius was well-known in Vienna. He was an authority all around Europe for at least two centuries.

What kind of world did Sendivogius, who called himself “the Cosmopolit”, live in? From 1587 on, King Sigismund III. Wasa (son of King Johann III. of Sweden and a Polish Princess) ruled Poland. This Polish King was married to two Austrian Archduchesses — sisters, by the way. In 1592 Sigismund married Anna of Austria, who died in Warsaw six years later. In 1602 he married again, now Anna’s sister Katharina. Anna and Katharina were sisters of Emperor Ferdinand II — which marks an important point in Polish policy at this time. Poland tried to keep a good and trouble-free relationship with the Emperor — despite the long and tense Bohemian border — as Poland had to watch out for the protestants, especially because of the conflict with the King of Sweden. In addition to these troubles came the Turkish threat in the south of the empire and combats and skirmishes against the Russians in the east.

You wonder why I am numbering all these political constellations? Michael Sendivogius was more than an important alchemist and chemist — he was a political agent. And he was the one who could be found at all important turning points.

### (2) Sendivogius: *Incognitus Philosophus Sarmata*

Who was this guy, this sort of “global player” Sendivogius? Michael Sendivogius was born in Luokwica near Sacz (about 70 km southeast of Cracow) on February 2, 1566.<sup>2</sup> His father was of noble birth and so was his mother Kataryna Pielsz. Michael’s name originally was Michał Sedzimir, he named himself Sędziwój, later on latinised Sendivogius. Michael started his studies of philosophy and theology in Cracow, but soon he got interested in the sciences. Reading the scripts of Arnaldus de Villanova, Sendivogius came about alchemy. At the age of 20 he tells about working together with an alchemist on a journey to Rome and Venice — he calls this script “*Operatie Elixiris Philosophici*”.<sup>3</sup>

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<sup>1</sup> M.-Th. Medved, “Den allergeheimsten und berühmtesten Alkahest zu machen. Chemiehistorische Untersuchungen zum Manuskript 11352 der Österreichischen Nationalbibliothek”, *Diplomarbeit* (TU Vienna 2006).

<sup>2</sup> For biographical data see e.g. K. Figala, “Sendivogius, Michael”, in: C. Priesner and K. Figala (eds.), *Alchemie. Lexikon einer hermetischen Wissenschaft*, C.H. Beck, München 1998, pp. 332–334; Z. Szydło, *Water which does not wet hands. The Alchemy of Michael Sendivogius* (Warszawa: Polish Academy of Sciences, 1994); R. S. Westfall, *Sendivogius Michael*, The Galileo Projekt 1995 (<http://galileo.rice.edu/Catalog/NewFiles/sendivog.html>); Z. Bela, *Michał Sędziwój (1566 – 1637)* (Kraków: Muzeum Farmacji, 2006).

<sup>3</sup> R. T. Prinke, “Operatie Elixiris Philosophici by Michael Sendivogius”, *Essentia* 5, 1984.

A contemporary of Sendivogius states that the young alchemist visited the universities of Cambridge, Ingolstadt, Leipzig, Altdorf, Frankfurt, Rostock and Wittenberg in order to increase his knowledge. These journeys are documented by Sendivogius' matriculation certificates in Leipzig, Altdorf and Vienna. He enrolled at the university of Vienna on October 13, 1591.

In 1593 Sendivogius came to Prague. The first occasion where his name appears on record is his working as an articulated clerk on an inheritance fight about Stephan Báthory, King of Poland — who had already died in 1586.<sup>4</sup> Since 1594 Sendivogius had been working as a noble servant at the imperial court of Prague.<sup>5</sup> On February 10, 1597 Sendivogius sent a letter to the Emperor telling him about a secret process he had already wanted to confide to him earlier. At that time the Emperor had indeed given him a specimen (an assemblage of ores), but Sendivogius had never received the 5600 thaler in advance that he had demanded. In a letter of advice to the personal servant of the Emperor Hans Popp Sendivogius mentions that he offered a special oil to Rudolf.<sup>6</sup>

This gives evidence for Sendivogius' being in personal contact with the Emperor, who himself spent a lot of time on his alchemical experiments. Some people suspect Sendivogius having been sent to different courts as a spy in matters of alchemy by the Emperor himself. On the other hand in those times alchemy was something like a key to gaining ground at any kind of court — and to being able to influence the political situation.

Since 1595 Sendivogius had also been working for King Zygmunt III. of Poland, who was related to the Hapsburg family by marriage, as mentioned before. Sendivogius spent the years between 1600 and 1603 mainly in Poland. He was the owner of two houses in Cracow. During these years he had to serve as negotiator in the conflict between Poland and the Hapsburg family, concerning access to the Black Sea.

In 1604 Sendivogius' most important work — based on the number of 56 editions until 1787 — has been published: *“De Lapide Philosophorum Tractatus Duodecim”*. The treatise was printed in Prague and its title was changed to *“Novum Lumen Chymicum”* in later editions. The 12<sup>th</sup> tract explains that the origin of heat would be motion. Motion causes water to rise as steam.

The work's epilogue contains an interesting — yet cryptic — hint at the “philosopher's salpêtre”, which would be important for every living creature, since it would embody the “hidden aliment of life”. It would be “sealed” in the air as some kind of colorless spiritus. Wenn Sendivogius says, that also men is fed by air, because in the air there is a hidden nutriment of life, one may argue that Sendivogius has already discovered oxygen — as this substance emerges when salpêtre is being heated. There is also a proof for Sendivogius' knowing about the oxidising effect of air: In 1607 the *“Dialogus Mercurii, Alchymistae Et Naturae”* was printed under his name (changed into the anagram “DIVI LESCHI GENVS AM(O)”) in which it says: “...vita vero ignis aer est, sine aere ignis extinguitur.” (But the actual life of fire is air — without air fire extinguishes.) Sendivogius insisted on an aerial “spiritus” which is connected with all kind of vital functions.

*Novum Lumen Chymicum* also contains a procedure to create the Philosopher's Stone.<sup>7</sup> A very special kind of “water” is essential, which can easily be identified as the very liquid, that emerges when well salpêtre (calcium nitrat with four molecules water) converts into an oily solution because of air humidity. This “water, which doesn't wet your hands”, actually feels kind of oily as it dehumidifies the skin.<sup>8</sup> Assuming that the dilution Sendivogius used was contaminated by ammonium chlorid — which is highly probable as the substance he started with came from earth near stables and contained a lot of chloride — it takes only a little bit of nitric acid (“water of salpêtre”) to make this liquid mixture

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<sup>4</sup> Österreichisches. Staatsarchiv, Haus-, Hof und Staatsarchiv, Reichshofrat, Resolutions-Protokolle 16th century, 68 (1593), f. 20v.

<sup>5</sup> Austrian National Library ÖNB Cod. 14.724 aus 1612, pp. 53–55; see also M. Staudinger, *Documenta Rudolphina, Kaiser Rudolf II. und seine Welt* (<http://free.pages.at/staudinger/Regest/Indices/Index.html>; 2006).

<sup>6</sup> Österreichisches Staatsarchiv, Haus-, Hof- u. Staatsarchiv, Habsburgisch-Lothringische Hausarchive, Familien-Korrespondenz A, Karton 4, f. 271r/v und 274v: “Erklärung des Michael Sezimir gegen was Er Seinen geheimen Prozeß Ihr. Kayl. Mayt. offenbaren wolle”. See also a letter to Hans Popp of the same date: f. 272r/v.

<sup>7</sup> P. A. Porto, “Michael Sendivogius on Nitre and the Preparation of the Philosophers' Stone”, *AMBIX XLVIII*, 2002, pp. 1–16.

<sup>8</sup> Already Khunrath mentions an *aqua sicca, non madefaciens manus* on the first engraving of the “Amphitheatrum Sapientiae Aeternae” (1595).

able to dissolve gold. This is even easier when you take small portions of a thin gold foil. Sendivogius talks about “living gold” by what he means is the kind of gold which can be found inside of untreated ores. This solution of gold is now able to “transmute” iron into gold — today we know that only a golden coating is achieved. (By the way, a very similar procedure is proposed in the already mentioned MS 11.352 of the ÖNB. The autor of this manuscript calls his fluid “Menstruum universale” and “Alkahest”.) Sendivogius’ recipe contains also a lot of weird and cryptic expressions but it actually describes nothing but a cementation process and the alchemist himself admits: “My experience only reaches that far”.

Another book was published in 1604 (the place where it was printed is unknown): the alchemical collected edition “*Alchymia vera*”. Amongst others, it contains scripts by Johann Isaac Hollandius and Bernhardus Trevisanus. Some years later a second edition was published.<sup>9</sup> It was edited by “I.P.S.H.M.S.” — a monogram which hasn’t been identified up to now. But whoever knows Sendivogius’ passion for cryptic puzzles and brain-teasers will surely interpret the initials like that: M.S. = **M**ichael **S**endivogius; I.P.S. could stand for **I**ncognitus **P**hilosophus **S**armata (= Polish); H. could be **H**onestus. The title of this edition of 1615 contains a symbol which reminds you of Dee’s “monas” when you turn it upside down.

*The second tract of the “Alchymia vera”* treats the issue of *mons philosophorum*. It’s centre is the depiction of a mountain which is full of symbols and secret hints. The Philosopher’s Mountain consists of a cliffy rock on the one hand and a castle surrounded by a wall with a tower. The way up to the top is the way to the Philosopher’s Stone; it is compared to the christian path to salvation in a poem that goes with the illustration. The fatuous already fail at the very beginning; only rabbits will find the entrance. In accordance with the well-known VITRIOL-formula, the way to the “lapis” leads inside the mountain first: “**V**isita **I**nteriora **T**errae **R**ectificando **I**nvenies **O**ccultum **L**apidem”. (Go inside the earth and purified you will find the hidden stone.) Halfway to the top we meet the green lion. This lion is a symbol for the mystic alchemical substance — for the essence, the “water of life and death” — as we know from the “Rosarium Philosophorum”. This text tells us that the lion will be defeated by the dragon and be thrown down into a grave, out of which the black raven will rise (one more symbol for the essence of life). In the end, the white eagle will emanate. This whole process will take place inside the “vas hermeticum” which is depicted at the right branch of the tree that is currently being planted. At the very top of the mountain you can see a blue sapphire — symbol of Emperor Rudolf II. for the “ultima materia”. The only thing floating above the sapphire is the Imperial crown, resembling the crown of Rudolf II. (the crown of 1602, which became later on in the 19<sup>th</sup> century the Austrian “Kaiserkrone”).

Between 1607 and 1616, Sendivogius had close contact to marshal Mikolaj Wolski (1555 – 1630), who wasn’t only interested in expanding the Polish iron industry (e.g. in Klobuck) but also in producing chemical substances and products. Sendivogius carried out his chemical/alchemical experiments in the laboratory of the castle of Krzepice.

In 1608 he was asked to travel to Moscow by Wojwod Jerzy Mniszech ( † 1613) — this mission seemed to be extremely dangerous because the journey had got something to do with the “Wrong Demetrius affair”. (Mniszech himself wanted to make his son-in-law tsar of Russia by intriguing and military offense.)

Afterwards in 1610 Sendivogius lived at the court of Duke Vincenzo Gonzaga of Mantua (1562 – 1612).<sup>10</sup> Probably his mission had something to do with the numerous marriages between members of the court of the Gonzagas with members of the Wasa and Hapsburg families.

We are not surprised that shortly before the outbreak of the Thirty Years War we find Sendivogius travelling through “Deutsche Lande”. We must not forget that Oswald Croll, the physician in ordinary of Christian of Anhalt the most prominent warmonger, was his friend. In 1616 Sendivogius went to Marburg, where he visited the well-known chemiatic laboratory of Professor Johann Hartmann whom he knew from Prague. In 1616 Sendivogius met also the physician and alchemist Michael Maier somewhere in Germany. Maier was very impressed by Sendivogius; therefore he called him “ANONYMVS SARMATA” in his printwork “*Symbola arureae mense duodecim nationum*”

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<sup>9</sup> J. Weyer, “Chemie und Alchemie im 16. Jahrhundert und die chemische Fachliteratur jener Zeit”, in: *Von der Astronomie zur Alchemie, Ausstellungskatalog* (Stadtverwaltung Rastatt 1991), pp. 59– 117.

<sup>10</sup> L. Szczucki, “Fragmenta mantuana”, *Studio Polonistyczne*, vol. XVIII / XIX, 1992, pp. 197–201.

(Frankfurt 1617) and dedicated two etchings to him — an action that made Sendivogius stand in one line with the most important alchemists ever existed. The same year Sendivogius published his *“Tractatus de Sulphure”*, which was devoted to the four Aristotelian elements and the three principles of Paracelsus — especially to the Paracelsian sulphur principle.

### (3) Uneasy in uneasy times

In the summer of 1619, Sendivogius visited the physician Albert Kerner in Torgau near Leipzig. He wanted Kerner to keep his name secret — as he always did.<sup>11</sup> Later on Sendivogius spent his time mainly in Cracow and in Vienna — here at the court of Ferdinand II. He promised Ferdinand to supervise the construction of a new lead mine in Silesia. What seems perfidious is that Sendivogius appears at the very same time (once again) as secretary of the King of Poland in Polish documents. He obviously served continuously two masters at a time. In Cracow Sendivogius had contact to both alchemical and pansophical circles. His promotor was the already mentioned aristocrat Mikolaj Wolski, who had made himself advocate of the Polish claims for the throne of the Hapsburg family.<sup>12</sup> At that time there was a strong connection between the Polish Hapsburg Party and the occult arts. Chemical experiments are said to have been carried out in Cracow at the castle Wawel.

In the Bohemian tragedy of 1620 Poland tried to stay neutral, but the Polish nobility generally represented anti-Hapsburg attitudes — a delicate situation for Sendivogius. Rafal Prinke wrote a long paper of Sendivogius' contacts at those times to alchemists influenced by Rosicrucian ideas.<sup>13</sup> One of these ideas was the glorification of the marriage of Frederick V. Elector of the Rhenish Palatinate (the “Winterkönig”) with Elisabeth Stuart as an alchemical wedding.

Sendivogius, the cosmopolitan, was often in serious troubles. He was more than once imprisoned and when the war went on he was in great financial difficulties. The Austrian treasury was gone as a result of the war — and therefore Sendivogius reminded Ferdinand II. several times of giving his salary to him. The situation didn't even change after Ferdinand ordered the Silesian chamber in Wroclaw to hand out 1.000 fl per year to Sendivogius. In 1630 Sendivogius was offered two villages — Krawarz and Katy. Yet these villages were in debt as well. Sendivogius had to talk to Ferdinand personally to get rid of these debts. In early 1636 he wanted to sell Krawarz and Katy, but he never got down to it. There is a letter of Sendivogius' daughter Maria Veronica — dated August 12, 1636 — in which she refers to herself as “the daughter of dead Sendivogius”.

Sendivogius — uneasy himself in uneasy times. He moved like a will-o'-wisp between all kinds of political and military fronts of his time. A wonderful example of “mobility”! Even the scripts reflect the lifestyle of this “Anonymus Sarmata” (anonymous man from Poland). He was one of the most important alchemical authors of his time — and there is a huge number of Sendivogius' scripts. Sendivogius' influence reaches as far as the 18<sup>th</sup> century; even Newton admired him a lot. Like every important chemist, Sendivogius realised chemical connections by intuition. He is one more example of how close the connection between modern “scientific” chemistry, weird observations, and alchemical theories is.

Never before and also afterwards alchemy and politics were so intensively amalgamated. Sendivogius represents this strange connection.

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<sup>11</sup> Letter in the legacy of Albert Kerner, April 1<sup>st</sup>, 1629 (communicated by Oliver Humberg 14. 7. 2006).

<sup>12</sup> R. J. W. Evans, *Rudolf II. Ohnmacht und Einsamkeit* (Graz: Verl. Styria, 1980), p. 143.

<sup>13</sup> R. T. Prinke, “Michael Sendivogius and Christian Rosenkreutz. The Unexpected Possibilities”, *The Hermetic Journal* 1990, pp. 72–98.