

# RESTORATION MEETS LINGUISTICS: GHENADIE'S *ICONOGRAPHY*

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**Keywords:** 19<sup>th</sup> century, Southern Romania, Bishop Ghenadie, painting handbook, *trahin blut*, cultural interferences, linguistics, material science.

**Abstract:** In 1891 the Bishop Ghenadie al Râmnicului published a painting handbook, based on a manuscript authored at the beginning of the 19<sup>th</sup> century by a painter called Gheorghe. Besides iconographical descriptions and technical recipes, the book also contains a quite unique vocabulary. Although the text is on the whole written in Romanian, several pigments are listed under bizarre pseudo-German names. The manuscript speaks to the nature of Romanian-German relations in the 19<sup>th</sup> century, and also constitutes a precious source of information on particular varnish recipes.

**Rezumat:** În anul 1891 Episcopul Ghenadie al Râmnicului publică o carte de pictură, care are la bază un manuscris redactat la începutul secolului al XIX-lea de către zugravul Gheorghe. Pe lângă indicațiile iconografice și de tehnică, acest text conține un vocabular cu totul special. Deși manuscrisul este integral redactat în românește, există pigmenți care apar sub nume pseudo-germane. Manuscrisul atestă încă o dată legăturile româno-germane în secolul al XIX-lea și reprezintă totodată o sursă prețioasă de rețete de vernis.

*Trahin blut*, *Cronghelb*, *Blaïvais*. These words are to be found in an early 19<sup>th</sup> century Romanian manuscript on the painter's craft. They don't reveal their meaning, at least not at first. The text is written in Romanian and, as was the norm for the beginning of that century, in Cyrillic script. In 1891, the text has been transcribed into Latin script, and as such it is still comprehensible to the Romanian readers of today. However, several parts – a pigment list, two shopping lists and two varnish recipes – remain unclear. Below, we will try to understand the linguistic phenomenon at work and to decipher these texts.

## The book in the book: the manuscript and the publication

In 1891, at the *Tipografia "Cărților Bisericești"*<sup>1</sup> the Bishop Ghenadie al Râmnicului<sup>2</sup> publishes a Romanian 19<sup>th</sup> century manuscript called "*Iconografia. Arta de a zugrăvi templele și icoanele bisericesti*".<sup>3</sup> He claims to have received the manuscript from the author's son.<sup>4</sup>

In the 1891 edition of the work in question, we are, in fact, dealing with two authors: the earlier, main, "older" one – the painter Gheorghe – and the later, "newer" one – the bishop Ghenadie – who read, reviewed and published the original text. If the main text is the raw material delivered by a monk, detailing his yearlong experience as a painter – as well as his broad experience in housekeeping and other various matters concerning rural life at the beginning of 19<sup>th</sup> century, as we are about to find out –, the *Iconography*<sup>5</sup> penned by the bishop enframes the painting handbook, introduces it and explains the cultural and historical context in which it emerged. The bishop – the secondary author – edited the entire original text, he transcribed it from one alphabet to another (from Cyrillic into Latin), interpreted, described and evaluated the manuscript not only in its content, but also in its materiality, discourse and language. The bishop carefully annotated a large amount of information.

The forward (*Preacuvântare*) introduces the reader into the substance of the manuscript. Before dealing with the main object of his *Foreword* – the manuscript –, the Bishop starts by establishing the cultural context, and in so doing takes on a broader topic: the relationship between religion and art.<sup>6</sup> The bishop talks about the reasons why religion uses artistic means to express its "mental conceptions".<sup>7</sup> He discusses music

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<sup>1</sup> The English name of the publishing house is "Typography for Church Books".

<sup>2</sup> English: Ghenadie of Râmnic.

<sup>3</sup> English: The Iconography. The Art of Painting Temples and Church Icons.

<sup>4</sup> Ghenadie 1891, p. 40.

<sup>5</sup> We will refer to the 1891 book *Iconografia. Arta de a zugrăvi templele și icoanele bisericesti* as *Iconography*.

<sup>6</sup> Ghenadie describes oriental music as emerging from the "not yet coordinated accents of the undisciplined Asian", while "in the disciplined Europe, where the imagination is controlled and ruled by rationality, the music starts with measure" (Ghenadie, 1891, pp. 7-8).

<sup>7</sup> Romanian: "concepțiuni mintale" (*Ibidem*, p. 5).

and tackles the differences between eastern and western religious art. Ghenadie writes about architecture and painting using the same West-versus-East parallel, and then moves on to the main topic: byzantine painting handbooks in the 19<sup>th</sup> Century. Before discussing painter Gheorghe's pigment lists we will dwell a while on what the bishop had to say about the text in his next chapter: "The Description of the Manuscript".<sup>8</sup>

In Ghenadie's publication the original manuscript is described in the smallest detail – that is to say, at least in those details which did not escape the eye of the pedantic Bishop. In this paper, we will carry over his description of the manuscript.<sup>9</sup> The yellow covers of leather-bound manuscript were decorated with golden chains, the spine of the book had six golden seams and floral ornaments, and on the front cover was depicted the biblical scene of *The Annunciation* – also crafted in gold.<sup>10</sup> The manuscript consisted of 330 written, 13 blank and 4 extra pages – where the painter had jotted down several notes.<sup>11</sup> One important detail was the eagle – the heraldic symbol of the Austrian Empire – displayed on "the white sheet" one sees when opening the manuscript.<sup>12</sup> The entire layout, the letters and the decorations are described by the Bishop. Except for three polychrome miniatures, the text and the ornaments were all in black and red ink.<sup>13</sup> Every chapter was decorated with flowers, garlands and horns of plenty.

Ghenadie also delivers a linguistic analysis of the manuscript's content. He identifies Greek influences – typical of this kind of 19<sup>th</sup> century Romanian texts – such as, for instance, letter swaps: U is used instead of V and vice-versa, leading to certain names being spelled "Ualentius" instead of "Valentius", or "Favst" instead of "Faust", for instance.<sup>14</sup> The punctuation remains unclear to the bishop, because the manuscript author used periods, commas and colons unsystematically.<sup>15</sup>

The bishop did not publish the integral manuscript, but only the parts related to painting. In the 1891 edition one can find information on iconography, painting techniques – like tempera and fresco –, materials and tools, but also facts about the goldsmith's craft which a painter might find useful. However, the manuscript has some extra-information. Here and there, amongst the descriptions of hieratic figures of saints and pieces of technical advice, the painter – Gheorghe – had also concerned himself with other "Needs of Humanity",<sup>16</sup> such as, for instance, recipes of medicines for healing different diseases, tips for vegetable cultivation and conservation, methods for combating different insects (Flies, Ants) and rodents, recipes for preparing gun powder, weapon cleaning and apiculture tips, sheep-protection against wolf attacks and cosmetic recipes (for hair dyeing).

The bishop concludes his introductory text with a short biography of the painter: *Țca și biografia scriitorului acestui manuscris*.<sup>17</sup> The painter Gheorghe later became a monk under the name Gherontie. He was born in 1807 and died at the age of 56.<sup>18</sup> He painted churches in Wallachia and kept a diary of his activity, wherein he also made mention of "several social and meteorological events in Oltenia".<sup>19</sup>

<sup>8</sup> Romanian: "Descrierea manuscrisului" (*Ibidem*, p. 21).

<sup>9</sup> The description corresponds closely to the manuscript preserved in the Library of the Romanian Academy under the index: ms. rom. 2151.

<sup>10</sup> Ghenadie 1891, p. 21.

<sup>11</sup> *Ibidem*, p. 22.

<sup>12</sup> *Ibidem*, pp. 21-22.

<sup>13</sup> *Ibidem*, p. 23.

<sup>14</sup> *Ibidem*, p. 27.

<sup>15</sup> *Ibidem*, p. 28.

<sup>16</sup> "But while writing, he thinks of other human needs and colours his manuscript with recipes, or with medicines, as he calls them." The original quote in Romanian: "Dar în cursul scrierei gândindu-se și la alte trebuințe ale omenirii, el împestrăză manuscrisul său cu rețete, său cu dohtorii, cum le numește el [...]" (Ghenadie 1891, p. 29).

<sup>17</sup> English: "Here you have the biography of the author of this manuscript." (*Ibidem*, p. 40).

<sup>18</sup> *Ibidem*, pp. 40-41.

<sup>19</sup> "With these words end up the biographical notes of Gherontie, the painter, which contain information mostly about his activity as a painter and several social and meteorological events in Oltenia." The original quote in Romanian: "Cu aceste se încheie notele biografice ale lui Gherontie zugravul, care cuprind, cum am văzut, date mai ales despre activitatea sa de zugrav și câte-va din întâmplările sociale și meteorologice ale Olteniei." (*Ibidem*, p. 46).

### The pseudo-German lexemes<sup>20</sup>

As mentioned above, the manuscript is written in Romanian with different foreign influences. There are several material names – contained in a pigment list, two shopping lists and two recipes – that are neither Romanian nor Greek nor Slavic, but they resemble German names. It is important to note that no other German linguistic influences are to be found anywhere else throughout the rest of the manuscript.

Which are these lexemes in question? To what phenomenon do we owe their presence? And: How did this phenomenon occur? In order to answer these questions, we identified the pseudo-German lexemes, established their Romanian and German equivalent and gathered them in Tab. 1. We also had to ask ourselves: which is the *signified* – as in the Saussurean conception – for each lexeme, or *signifier*. In other words: Which is the actual pigment that Gheorghe refers to? In order to deliver our results, we have recorded, in the very same table, the chemical formula for each *deciphered* lexeme.

The texts are the following:<sup>21</sup>

#### 1. Pigment list at pages 247-248:

*Blaivais*, *făioară* in Romanian, the ordinary one / *Şafăr vais*, a better kind of *făioară*, the second hand / Yellow ocher, which is called *umbră deskisă* [bright umber] / *Geiben raus*, an orange yellow paint, a bit dark / *Cron raus*, yellow paint, a bit dark / *Şişghelb*, this paint is bright yellow / *Neapolghelb*, another bright yellow paint / *Aur pigment*, an yellow paint [obtained from] glassy stone / Dark umber, or *Ohră înkisă* [dark ocher] / *Ținober*, this stone is finer / *Kinovar*, this is red paint, grounded / *Coslerer erde*, this is lacquer, the finest carmine / *Carmil*, a burgundy paint, good underneath / *Lacă*, a dark burgundy paint / *Lacă ovrească*, pieces like bullet round ordinary / *Ghiul bahar*, a paint from the turkish land, dark red / *Kilelermeniū*, thin, fine *englirod*, / *Kilermaniū* lump / *Minăū*, red paint, ordinary / *Vol*, the gilders put this paint also in the poliment / *Naigrin*, this is green paint, / *Holerder grin*, also dark green / *Grişpan*, apply this paint over gold and silver / *Gumigut*, if you apply this paint on a white [sur]face, it makes it golden / *Berhi blaū*, a blue german paint / *Berilină narblaū*, a dark paint, with *făioară* you [can] make blue / *Cazblau*, blue paint for houses / *Kināros*, fume ink, from birch, burned bark / Ink from burned bone in covered pot laid in the oven / Ink from peach bones, burned, alike and grounded / Ink from burned nuts, alike and grounded / *Şiar* green stone, you use it with *făioară* / *Naigrin*, you mix it with *berlinār blaū*, darkens the green / *Naigrin de top*, [mixed] with ink you get darker green / *Cronghelb* with *berlinār blaū*, you get green, both bright and dark.<sup>22</sup>

#### 2. First shopping list at page 258:

*Cronghelb*, the fine one, unit 13 kreuzer. / *Pariziār-bloū* 2 kreuzer the unit. / *Mihner lac* 3 *sfanțihî* (Austrian coin; germ: Zwanzig) / *Carmin lac* 4 *sfanțihî*. / *Cronghelb de Paris* unit 15 kreuzer. / *Carmin lac de Paris* fine, 3 *sfanțihî* the dram.<sup>23</sup>

<sup>20</sup> Linguists define as *lexeme*: “a unit of lexical meaning, which exists regardless of any inflectional endings it may have or the number of words it may contain. [...] The headwords in a dictionary are all lexemes.” (Crystal 1995, p. 118).

<sup>21</sup> The texts have been translated into English. The untranslated words in the original text are marked in *italic*. Our additions are marked [between brackets].

<sup>22</sup> Romanian: “*Blaivais*, *făioară* pe rumânește, de cea ordinar / *Şafăr vais*, *făioară* mai bună, a doua mână / *Ohră* galbenă, cei dice *umbră deskisă* / *Geiben raus*, o vâpselă portocalie galbenă. puțin *înkisă* / *Cron raus*, vâpselă galbenă puțin *înkisă* / *Şişghelb*, vâpselă acésta e galbenă *deskisă* / *Neapol ghelb*, iar vâpsea galbenă *deskisă* / *Aur pigment*, o vâpselă galbenă din piatră sticloasă / *Umbră înkisă*, sau *Ohră înkisă* / *Ținober*, piatră acésta e mai fain / *Kinovar*, acésta e vâpsea roşie, pisată / *Coslerer erde*, acésta e lac, carmin cel mai fain / *Carmil*, o vâpsea vişinie, fain pe supt acésta / *Lacă*, o vâpselă vişinie *înkisă* / *Lacă ovrească*, bucăţi ca glonţul rötund urdinar / *Ghiul bahar*, o vâpselă din ţara turcescă, roşu *înkis* / *Kilelermeniū*, suptire, *englirod*, fain / *Kilermaniū* bulgăr / *Minăū*, vâpselă roşie, urdinară / *Vol*, acésta vâpselă pun poleitorii şi în poliment / *Naigrin*, acésta e vâpsea verde, se vinde cu topul / *Holerder grin*, asemenea verde mai *înkis* / *Grişpan*, acésta vâpsea să o dai peste aur şi peste argint / *Gumigut*, acésta vâpsea dânduo pe faţă albă, o face de aur / *Berhi blaū*, o vâpsea albastră nemţescă / *Berilină narblaū*, o vâpsea *înkisă*, cu *făioară* faci albastru / *Cazblau*, vâpselă albastră de case / *Kināros*, cernélă de fum, de mestécăn, coajă arsă / *Cernélă* de os ars în oală astupată în cuptor băgată / *Cernélă* de oase de persică, arse, asemenea şi pisate / *Cernélă* de nucî arse, asemenea şi pistate / *Şiar* piatră verde, cu *făioară* se lucrăză / *Naigrin*, amestecă cu *berlinār blaū*, verde face *înkis* / *Naigrin de top*, cu cernélă faci verde mai *înkis* / *Cronghelb* cu *berlinār blaū*, faci verde, şi *deskis* şi *înkis*” (Ghenadie 1891, pp. 247-248). This list contains not only the pigments and their description, but also their prices, which we did not transcribe.

<sup>23</sup> Romanian: “*Cronghelb* de cel fain, lotul 13 creiţari. / *Pariziār-bloū* 2 creiţari lotu. / *Mihner lac* 3 *sfanțihî*. / *Carmin lac* 4 *sfanțihî*. / *Carmin lac de Paris* fino, 3 *sfanțihî* dramu.” (*Ibidem*, p. 258).

3. Second shopping list at pages 258-259:

*Ultramarin* 6 *sfaŋtîhî* the unit. / *Carmin lac* 4 *sfaŋtîhî* the unit. / *Mihner lac* 3 *sfaŋtîhî* the unit. / *Cronghelb de Paris*, 15 kreuzer the unit. / *Cronghelbde India*, 13 kreuzer the unit. / *Lustru de Damas* for table cloths, 20.50 drams. These were bought in Braşov fortress, 1847 Avg. [August] 25

2 bunches of hair brushes.

There were bought, in the same year, the paints written bellow, from Râmnic, from *kir stancu Pop's* shop. 1847.

*Faioară* or *Blaîvas*. / *Minău*. / *Kinovar* already grounded. / *Comid* white. / Entire calculation these 4 pens Avg [August]. 22.

Cooper *hfunviht* 4 *sfaŋtîhî* each by the arch in *Sibiiu*.<sup>24</sup>

4. Recipe at page 259

Recipes for poliment on gypsum

4 units, good chalk. / 2 units, Armenian bole. / 2 units, *candîh ţucăr*.

First of all you ground these three materials well and you put them in a pot and then put egg white and you mix it well and let it dry, and then, when you will be willing to gild, wet it with water and apply it wherever you want to gild, and after it will dry, wet it with spirit [alcohol], and immediately apply the gold, and let it until it dries, and polish it.<sup>25</sup>

5. Second Recipe at page 259

Recipes for mat. [materials] you put on gold.

2 units, *Gumilac egranes*<sup>26</sup>. / 2 units, *Libăr aloe*. / 1 unit, *zandrac*. / a quarter of unit, *Gumiguş*. / a quarter of unit, *Trahin blut*. / 2 units, *Bernştaen*.

You put all these and ground them together, and sift them through a thick sieve, and put them in a bottle then pour over it 16 units thin turpentine and fasten it and put it near heat or in hot water until it transforms in an homogenous mixture and then sift this mixture through a clean cloth and put it then again in the bottle and when you want to make pure gold or silver then spread it with the brush in a thin layer and you will do the mat. [material].<sup>27</sup>

The pigment list is an enumeration supplemented by short descriptions, shopping lists offer information about the painter and his itineraries in search of materials and the recipes – one for varnish and one for poliment – bring new information about the painting techniques used in 19<sup>th</sup> century Romania. According to the second recipe, *trahin blut*, *gumiguş*, *bernstaen* and other materials are mixed in a bottle, put in a warm place, sifted and re-poured in the bottle. But what is *trahin blut*?

<sup>24</sup> Romanian: “Ultra marin 6 sfaŋtîhî lotu. / Carmin lac 4 sfaŋtîhî lotu / Mihner lac 3 sfaŋtîhî lotu. / Cronghelb de Paris, 15 creiţari lotu. / Cronghelb de India, 13 creiţari lotu. / Lustru de Damas pentru muşamale, 20,50 dramuri. / Aceste saŋ cumpărat de la cetatea Braşov, 1847 Avg. 25 / 2 legături de condeie de pěr.

Tot la acest lét saŋ maî cumpărat aceste de maî jos însēmuate văpsele, de la Râmnic, din prăvălia Dumnélui kir stancu Pop. 1847.

Faioară saŋ Blaîvas. / Minău. / Kinovar pisat gata. / Comid alb. / Socotéla toată aceste 4 condee Avg. 22.

Hfunviht de alamă 4 sfaŋtîhî una la boltă la Sibiiu.” (*Ibidem*, pp. 258-259).

<sup>25</sup> Romanian: “Răţete pentru poliment pěr ipsos. /

4 loţi, Cretă bună. / 2 loţi, Bolos armenos. / 2 loţi, Candîh ţucăr.

Aceste trei materii maî întâiu să le pisezi bine, şi să le puî într-o oală, apoi să puî albuş de ou, şi să amesteci bine, şi să laşi să se usuce, apoi când vei voi ca să poleeşti, săl moî cu apă, şi să daî pe unde voeşti să poleeşti, şi după ce se va usca, să uđi cu spirt, şi de loc să puî şi aurul, şi săl laşi până se va usca, şil seliviseşte.” (*Ibidem*, p. 259).

<sup>26</sup> *Egranes* might be the french *en grains*. The suggestion belongs to Prof. Dr. Gabriel H. Decuble.

<sup>27</sup> Romanian: “Răţete pentru mat. carele daî peste aur.

2 loţi, Gumilac egranes. / 2 loţi, Libăr aloe. / 1 lot, zandrac. / Un sfert de lot, Gumiguş. / Un sfert de lot, Trahin blut. / 2 loţi, Bernştaen.

Aceste toate să le piseđi la un loc, şi să le cerni printro sită désă, şi să le puî într-o sticlă, apoi să torni dasupra lor 16 loţi, terpentin suptire, să o legi bine sticla la gură, şi să o pui la căldură, saŋ în apă fiartă, până se vor face o migmă, adecă tot una, apoi să puî în sticlă peste aceste materii cu o lingură de ulei hert curat, şi să laşi sticla la căldură, până se vor uni toate una, pe urmă să se stricoare acéstă unită materie printro cărpă curată, şi să puî iarăşi în sticlă astupată bine, şi când vei voi să faci aur curat, saŋ argint, atuncea săl daî suptire cu penđelu, şi vei face mat.” (Ghenadie 1891, pp. 259-260).



*Trahin blut* is the Latin *sanguis draconis*, the Romanian *sânge de dragon*, the English *dragon blood*, the French *sangre de dragon* and the German *Drachenblut*, a natural resin obtained from a plant. But how did the painter come up with the idea to write *trahin blut*? A plausible scenario would play out as follows: Gheorghe obtained the red resin from German-speaking merchants – we know from the shopping lists that he bought materials in Sibiu and Braşov –, he heard the names and wrote them in his book. However Gheorghe's biography and the story of the pigment's acquisition are less important. Rather, what merits our attention is the linguistic phenomenon and the potential usefulness of the deciphered text fragments – is there a practical use of the text in conservation-restoration or material science?

Firstly, *Drachenblut* became *trahin blut* through a phonetic figure, more precisely, through the substitution of one alveolar, plosive consonant – *d* –, by another alveolar, plosive one – *t*. Analogously, *Kandiszucker* was transformed into *candih ţucăr*; the alveolar, fricative consonant *s* (from *Kandis*–) was replaced by the glottal, fricative consonant *h*. Several lexemes written are phonetic transcriptions of the German ones using specific Romanian graphemes:<sup>28</sup> *zandrac*, *blaivais*, or *ţinober*. The author transcribes the German diphthong *ei* as *ai*: *vais*, *blei*, and substitutes the German grapheme *ü* with *i*: *şişgelb*, *naigrin*, *grişpan*. *Englirod* (Germ. *Englischrot*) offers an example of syncope in the form of substraction – a figure of the phonological derivation. For the fossil resin called *amber*, Gheorghe writes *Bernştaen* (Germ. *Bernstein*) instead of the Romanian *chihlimbar*. In this case – the same as for *trahin blut* –, the author chooses a radically different lexeme to designate the material.

### Conclusions

Ghenadie's *Iconography* is a text which provides pieces of information about particular linguistic phenomena, about Romanian-German nonverbal intercultural relations and the history of materials. The 19<sup>th</sup> century Romanian Orthodox painter Gheorghe develops a special terminology. We dare say that he invents, or at least improvises, new names for painting materials, especially for pigments. As evidence of intercultural interactions, the work is also interesting from the socio-cultural point of view, as it attests to a small-scale – and probably usual – type of economic interaction. Gheorghe (probably) buys the pigments, but he does not translate their names into Romanian. He writes them as he hears them. The deciphered texts attest to a type of communication between craftsmen, where the verbal components, the words and the language, are less significant than the traded material. For a more detailed picture of the phenomenon, questions about the semiotic implications are to be answered: Did Gheorghe know what *sanguis draconis* actually was? But just didn't care to name it *sânge de dragon*? And left it *trahin blut*? Or did he simply not know what it was, and therefore bought it on an experimental whim, as an exotic product the meaning and properties of which escaped him? Or did the term not exist in Romanian? But what about *amber*, which has its equivalent in *chihlimbar* – a term already in use in the 19<sup>th</sup> century? Moreover, conservators are very clear on the fact that a varnish such as the one described above, containing a mixture of shellac, dragon blood and amber alters in time and becomes very difficult to remove. Therefore, the text offers restorers precise information about particular painting techniques, thus providing the opportunity to develop better restoration methods.

<sup>28</sup> Linguists define as *grapheme*: "Graphemes are the smallest units in a writing system capable of causing a contrast in meaning." (Crystal 1995, p. 105).

Tab. 1<sup>29</sup>

Word in text	Substance/Chemical formula	German	Romanian	English	Page
<i>Berhi blaű</i>	$2\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$	Bergblau	azurit	azurite	248
<i>Berilină narblaű</i>	$[\text{Fe}(\text{CN})_6]_3\text{Fe}_4$	Berliner Blau ?	albastru de Prusia?	Prussian blue?	248
<i>Bernštaen</i>	$\text{C}_{10}\text{H}_{16}\text{O}$	Bernstein	chihlimbar	amber	259
<i>Blaivaıs</i>	$2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$	Bleiweiß	alb de plumb	white lead	247
<i>Candih űucăr</i>	$[\text{C}_6\text{H}_{12}\text{O}_6]$	Kandiszucker	zahăr candel	rock sugar	259
<i>Cazblau</i>		Blau?	albastru?	blue?	248
<i>Coslerer erde</i>	Clay mineral?	Erde?	pământ?	earth?	247
<i>Cron raus</i>					247
<i>Cronghelb</i>	$\text{PbCrO}_4$	Chromgelb	galben de crom	chromate yellow	248
<i>engliród</i>	$\text{Fe}_2\text{O}_3$	Englischrot	oxid de fier	English red	247
<i>Geiben raus</i>		Gelb?	galben?	yellow?	247
<i>Grişpan</i>	$\text{Cu}(\text{CH}_3\text{-COOH})_2 \cdot 2\text{Cu}(\text{OH})_2$	Grünspan (Plinius <i>aerugo</i> )	verdigris; verde de cupru	verdigris	247
<i>Gumilac egranes</i>	Organic, complex formula	Schellack	şerlac	shellac	259
<i>Gumiguş</i>		Gummigutt?			259
<i>Gumigut</i>	Organic, complex formula	Gummigutta; Gummi gutti		gamboge	247
<i>Holerder grin</i>		Grün?	verde?	green	247
<i>Hűunviht (de alamă)</i>					259
<i>Kinäros</i>	C	Kienruű; Lampenschwarz, Flammruű	negru de fum	carbon black	248
<i>Libăr aloe</i>	Organic, complex formula	Aloe	aloe	aloe	259
<i>Mihner lac</i>	$\text{C}_{22}\text{H}_{20}\text{O}_{13}$	Karmin	carmin	carmine	258
<i>Neapol ghelb</i>	$\text{Pb}(\text{SbO}_3)_2 / \text{Pb}_3(\text{SbO}_4)_2$	Neapelgelb	galben de Antimoniu / de Bismut	naples yellow/ antimony yellow	247
<i>Naűgrin</i>	$\text{Cu}(\text{CH}_3\text{COO})_2 \cdot 3 \text{Cu}(\text{AsO}_2)_2$	Neugrün, Schweinfurter Grün	verde smarald, verde de Paris	Paris green	248
<i>Parizăr-bloű</i>	$[\text{Fe}(\text{CN})_6]_3\text{Fe}_4$	Pariser Blau/ Berliner Blau	albastru de Prusia	Parisian blue/ Prussian blue	258
<i>Şafăr vais</i>		Weiß?	alb?	white?	247
<i>Şiűghelb</i>	$\text{C}_{16}\text{H}_{12}\text{O}_7$	Schüttgelb	stil de grain	stil de grain	247
<i>Trahin blut</i>	$\text{C}_{18}\text{H}_{18}\text{O}_4$	Drachenblut	sânge de dragon	dragon blood	259
<i>űinober</i>	HgS	Zinnober	cinabru	cinnabar	247
<i>Zandrac</i>	$\text{C}_{16}\text{H}_{23}\text{N}_{21}\text{O}_{24}$	Sandarac	sandarac	sandarach	259

<sup>29</sup> In establishing the pigment names and chemical formulas, we have consulted the following materials: Baumer 2009; Doerner 1985; Fitzhugh 2007; Matteini, Moles 1994; Mills 1987; Eastough 2004; Săndulescu-Verna 2000.

Information about the structure of Table 1: Each lexeme has a chemical formula, a German and Romanian equivalent and the page where it can be found in Ghenadie's *Iconography*. The corresponding spaces for the few undeciphered lexemes were left blank and the uncertain interpretation was signalled with a question mark.

## Bibliographical abbreviations:

- |                            |  |
|----------------------------|--|
| Baumer <i>et alii</i> 2009 | U. Baumer, P. Dietemann, J. Koller, <i>Identification of resinous materials on 16<sup>th</sup> and 17<sup>th</sup> century reverse-glass objects by gas chromatography/mass spectrometry</i> , International Journal of Mass Spectrometry 284, 1-3, 2009, pp. 131-141. |
| Crystal 1995               | D. Crystal (ed.), <i>The Cambridge Encyclopedia of The English Language</i> , Cambridge, 1995.   |
| Crystal 2005               | D. Crystal, <i>How Language Works. How Babies Babble, Words Change Meaning and Languages Live or Die</i> , New York, 2005.   |
| Doerner 1985               | M. Doerner, <i>Malmaterial und seine Verwendung im Bilde</i> , Stuttgart, 1985.  |
| Eastaugh 2004              | N. Eastaugh, <i>The Pigment Compendium. A Dictionary of Historical Pigments</i> , Elsevier Butterworth-Heinemann, 2004.  |
| Fitzhugh 2007              | E.W. Fitzhugh, <i>Artists' Pigments: A Handbook of Their History and Characteristics</i> , Washington, 2007.   |
| Ghenadie 1891              | Ghenadie al Râmnicului, <i>Iconografia. Arta de a zugrăvi templele și icoanele bisericesti</i> , București, 1891.  |
| Matteini, Moles 1994       | M. Matteini, A. Moles, <i>La chimica nel Restauro</i> , Firenze, 1994.   |
| Mills 1987                 | J.S. Mills, <i>Organic chemistry of museum objects</i> , London, Boston, 1987.   |
| Plett 1975                 | H. F. Plett, <i>Textwissenschaft und Textanalyse. Semiotik, Linguistik, Rhetorik</i> , Heidelberg, 1975.   |
| Săndulescu-Verna 2000      | C. Săndulescu-Verna, <i>Materiale și tehnica picturii</i> , Timișoara, 2000.   |