

## Images

"Now your heart appears to me," Judges 16:18, from Père François Froment, SJ, *Veritable adoration du Sacré Cœur du Jesus-Christ*. Paris: François Louis Rigoine, 1699, following page 334 (fig. 5).

Anonymous, Heart of Jesus and Mary, with Saints Bernard and Gertrude, early 18<sup>th</sup> century. Boyadjian Collection, inventory no. FB 512, Royal Museums of Art and History, Brussels, Belgium (fig. 8.).

Anonymous, Offering of the Heart, ca. 1400–10, wool and silk tapestry. Metropolitan Museum of Art, New York (fig. 1.)

Anonymous, The Sons of Venerable Father Eudes strong in the Heart of Jesus and of Mary, engraving, 17<sup>th</sup> century. Reproduced in *Œuvres Complètes du Vénérable Jean Eudes*, vol. 6. Paris: Gabriel Beauchesne, 1908, frontispiece (fig. 3).

Christ-Cupid fires arrows in to a Human Heart, from Carel van Mallery's edition of Antoine Wierix, *Cor Jesu Amanti Sacrum* (1595), published in Antwerp by J. Galle, 1628 (fig. 2).

Delamonce, Ferdinand. *They will come and adore*, frontispiece, Joseph de Galliffet, *De culti sacrosancti cordis dei*, 1733; reused as frontispiece in *L'Excellence de la devotion au cœur adorable de Jesus-Christ*, French translation, Lyon: Henri Declaustre, 1743 (fig. 10).

Depiction of the Sacred Heart of Jesus, 1690. Picture Art Collection (fig. 4).

Immaculate Heart of Mary, in Joseph de Galliffet, *L'Excellence de la devotion au Cœur adorable de Jesus-Christ*. Lyon: Henri Declaustre, 1743, following page 290 (fig. 7).

Morin, Jean. Saint Bernard, after Philippe de Champaigne; frontispiece to *La Vie de Saint Bernard*. Paris: Antoine le Maitre, 1648 (fig. 9).

Sacred Heart of Jesus, in Joseph de Galliffet, *L'Excellence de la devotion au Cœur adorable de Jesus-Christ*. Lyon: Henri Declaustre, 1743, following page 280 (fig. 6).

Stefan Laube

## Heart and Vial as Communicating Tubes

## Notes on the Imagery of Vessels in Early Modern Times

What does it mean when a heart or a vial appears in an engraving, and this in the 16<sup>th</sup> and 17<sup>th</sup> centuries, in the Emblematic Age?<sup>1</sup> And what does it mean when the semantics of these geometrical forms get multiplied as soon as they are visibly filled? It seems that in early modern cultures of knowledge and piety, the vial and the heart are powerful signs.<sup>2</sup> Thus, two contemporary spiritualities emerge, one biblically oriented and one that takes into account nature and its materialities. The common feature of these spiritualities is that they are often expressed in sequences of images, so that the steps of meditation for the pious and the stages of transmutation for the adepts are better anchored in memory. The article analyses the expressiveness and the validity of such heart representations and builds a bridge to the pictorial language of alchemy, in which the glass vial plays an outstanding role. In it, not only matter should be redeemed, but also the human being who experiments with it. As soon as we come across a vial or a heart that exposes a pictorial content in its geometric design, we are above all dealing with a figure that arouses the memory through human perception. Memory is conceptualised as a complex and multilayered mechanism of establishment, use, and transformation of practices of visualization, perception and meditation by different agents – Catholic and Protestant theologians, alchemists, philosophers – especially inasmuch as iconographic memory fluctuates between stability and polyvalence.

## Heart as a Sign – Heart as an Organ

Everyone is probably familiar with the heart as a visual sign; everyone can paint it. It will undoubtedly be a curved figure: two rounded humps at the top, which taper and meet at the bottom, signifying in many contexts love, feeling and tenderness. Even in

1 At that time, it was believed that every phenomenon shares some similarities which, in a multi-stage process, depict the whole. See Ashworth, "Natural History and the Emblematic World View"; Praz, *Seventeenth Century Imagery*; Warncke, *Sprechende Bilder – Sichtbare Worte*.

2 Stafford, *Symbol and Myth*.



the age of its transplantability, the heart in our global civilization remains an ubiquitous symbolic organ of humanity and affection.<sup>3</sup> On the keyboards of our smartphones and laptops, as an indicator of our inner states, one can easily create various heart symbols, in all possible colors, broken or pierced with arrows, all of which are easily understandable in the broad socio-cultural context of its contemporary usage.

In most world cultures, the heart plays a central role in human relationships. Its meaning goes far beyond the reference to a specific organ in the body: the heart often refers to the innermost nature of a person's character, her 'spirit' or 'soul' in the broadest sense. In biblical language and theological anthropology, not only feeling, but also wanting and thinking have their seat – often hidden – in the heart.<sup>4</sup> It is not easy to trace the development of the heart shape. Its history is one of plural codifications creating a space of memory, from which polyvalent constructions of meaning could be deduced.<sup>5</sup> The relationship between form and meaning, signifier and signified, the visible and the invisible fluctuated between containment and openness. The heart shape can be traced back to Mycenaean tombs excavated by Heinrich Schliemann.<sup>6</sup> Evidence of playing cards with the heart symbol in the late 15<sup>th</sup> century indicates that the heart symbol was widespread in large parts of society at that time already. At the same time, some devotional images depicted damaged hearts, with puncture wounds made realistic by a real cut in the paper, as can be seen in the famous little image "The Sacred Heart" from the Albertina in Vienna.<sup>7</sup> The physical wound inflicted to Christ's side by Longinus' piercing lance becomes the portal through which the believer enters into his love. Christ's 'Sacred Heart' became one of the most central images in Christian piety in popular devotional books, in particular as the focal point in mystical piety.<sup>8</sup> Henry Suso, along with his contemporaries Johannes Tauler and Master

3 Høystad, *A History of the Heart*; Schipperges, *Welt des Herzens*; Kruse and von Plessen, *Von ganzem Herzen*; Sloterdijk, "Herzoperation oder: Vom eucharistischen Exzeß"; Pigeaud: "Cœur organique, cœur métaphorique"; Deneke, *Sprache der Herz-Operateure*.

4 Martin Kemp has pointed out that in the prophecies of Jeremiah in the Old Testament, in his famous lamentations, the heart is invoked no less than sixty-six times. Kemp, "Heart", in *Christ to Coke*; Seifert, "Erforsche mich, Gott, und erfahre mein Herz..." Das Herz in Theologie und Frömmigkeit".

5 See Franziska Metzger's article in this volume.

6 Vonessen, "Das Herz in der Naturphilosophie"; Bräm, "Vom Herzen. Ein Beitrag zur systematischen Ikonographie"; Kemp, "Heart".

7 Lentès, "Körper schafft Heil", p. 152. This heart picture is used as the cover for Georges Didi-Huberman's *Limage ouverte* (Paris: Gallimard, 2007). What could that mean? There is no image without opening. And often, the open image reveals a fundamental dissemblance. One seeks similarity not in the resemblance with the forms of the real, but in the matter: in the moods of a body suffering in the act of martyrdom, that is, in the spectacular repetition of the sufferings of Christ.

8 Bräm, "Vom Herzen. Ein Beitrag zur systematischen Ikonographie", pp. 169–175.



Fig. 1: Juriaan oder Jurr Pool, *Anatomics among themselves with a heart*, 1699, Leiden, Museum Boerhaave.

Eckart, was occupied throughout his life by the tension between the transcendence of the divine and its medial presence in this world.<sup>9</sup> Suso desired from God a "[...] permanent mark of our mutual love, that I am yours and that you are my heart's eternal affection, a testimony that no loss of memory could ever eradicate."<sup>10</sup> Intuitively, Suso grasped what needed to be done. He took a stylus and carved Jesus' *nomen sacrum*, IHS, directly into the flesh above his heart. Although he bled, he felt no pain. After the wound healed, "[the name] remained on his heart, and whenever the heart beat, the name moved with it."<sup>11</sup>

Until the Renaissance, the figure of the heart was nothing more than a sign with its symbolic meaning – a geometrical stylized image consisting of two symmetrical semicircles converging at the bottom in a point in order to express a bond of affection. This heart symbol, however, looked quite different from the actual organ in people's bodies, which was faithfully depicted for the first time in that period in graphics in

9 See also Webb, *Medieval Heart*.

10 Seuse, *Deutsche mystische Schriften*, pp. 26–27 (translation by the author).

11 Ibid (translation by the author). I would like to thank Gia Toussaint for this reference in her talk "Heart and Cross in the Works of Henry Suso", at the CIHA, Florence, September 2019; see also Braungart, "Schmerzgedächtnis – Körperschrift", pp. 364–365.



anatomical treatises and in representative paintings from the university milieu (fig. 1). "One has glorified the heart as the sun, even as the king, while upon closer examination one finds nothing but a muscle,"<sup>12</sup> said Nicolaus Steno (Niels Stensen) – a Danish physician, anatomist and geologist who made a career as a convert in the Curia – with disparaging sobriety.<sup>13</sup> However, the pictographic heart is similar enough to the anatomical heart – albeit remotely – to make it recognizable. We know by perceptual instinct and pictographic custom how such schematized visual signs work – as iconographic memory.<sup>14</sup> A similar schematization for easier recognition was applied to the vessels that alchemists handle. In illustrated works and manuscripts, a wide range of various devices is often portrayed as the telling pear-shaped glass vial, which suitably served as stage for pictures.

As already stated, the heart as a pictorial symbol reveals the hidden state of the human mind: the invisible inner state is made at least partially visible, comprehensible. It is hardly surprising that the heart is present in the universal pictorial scripts that circulated among scholars during the Renaissance. The motif can already be found in the mysterious work of Horapollo, the *Hieroglyphica* discovered by humanists of the early Renaissance,<sup>15</sup> dating from late antiquity, as an inflamed heart on a burning censer, which probably represents a sacrificial altar.<sup>16</sup> The meaning of the sign is debated: Egypt, fervent prayer, immortality. Such heart images can certainly be seen in the context of the (then almost fashionable) attempts of scholars – from Jan Amos Comenius to John Wilkens – to develop a universal language consisting of signs that functioned according to spontaneous mechanisms of pictorial effect as codified memorial mode.<sup>17</sup> It was a matter of bringing *res* and *verba* together better, compared to what had been the case before then, by means of a pictogram.<sup>18</sup> Not only heavenly

12 Nicolaus Steno, *Nicolai Stenonis Opera philosophica*, ed. Wilhelm Maar (Copenhagen: Vilhelm Tryde, 1910), quoted in Schipperges, *Welt des Herzens*, pp. 63–64 (translation by the author).

13 This disillusioned view of the heart as a muscle did not prevent him from choosing a traditional emblem with a black cross and a red heart at its centre as Auxiliary Bishop of Münster. See Sobiech, *Herz, Gott, Kreuz*.

14 A minimal level of resemblance is enough, as we see repeatedly with other iconic images: we have no trouble in seeing two dots, a vertical line, and a curved, horizontal one within a perfect circle as the head of a happy person.

15 Horapollo, *Zwei Bücher über die Hieroglyphen*.

16 Book 1/22. In the literature, there is a drawing that is attributed – probably mistakenly – to Albrecht Dürer.

17 Weststeijn, "From hieroglyphics to universal characters. Pictography in the early modern Netherlands"; Schadel, *Sehendes Herz (cor oculatum) – zu einem Emblem des späten Comenius*.

18 Dutch has a beautiful contemporary term for pictograms: "bildletteren". The fact that Latin was becoming less and less important as a world language at that time could have fuelled these efforts. The produc-

love can be expressed through the emblem of the heart, but also its very earthly variant, which can be just as passionate since it causes suffering. In the age of the Baroque, one could unproblematically combine erotic allusions with religious virtue.

Particularly in devotional literature from around 1600, the heart ensemble became the much-used vocabulary of an elaborate pictorial language – among both Catholics and Protestants.<sup>19</sup> The cover picture of the work *Pia desideria* (Antwerp 1624) by the Belgian Jesuit Herman Hugo shows a winged heart (fig. 2), designed as a vessel in which there is a flame.<sup>20</sup> It is undoubtedly one of the most widespread works of Baroque emblematics.<sup>21</sup> What does the phrase "Baroque emblematics" actually mean? Not least something like a universally applicable visual language. Like no other symbol, the heart is predestined to convey the relationship between human beings and God in all its different facets at a glance. Incidentally, the polyglot author, Herman Hugo, was very interested in establishing a *lingua franca* based on images and on the power of pictographic memory. Thanks to the reports of the Jesuits, he was also familiar with the sign systems of non-European cultures. He therefore noticed that the Chinese wrote with brushes that Europeans used exclusively for painting.<sup>22</sup> The ideal of universal comprehensibility may have inspired the author of what is probably the first systematic study of writing from its beginnings to the printed book to also write the emblem book *Pia desideria* and have it richly illustrated by Boetius à Bolswert. The stylized shape of the heart is so generally understandable and omnipresent that hardly any reader of the emblems had to think about this self-evident symbolisation, in contrast to many other visual motifs, whose meaning could not be understood without explanation. The heart also plays a prominent role as a pictorial symbol in the development of the Reformation, for instance in the Luther rose: in a blue field encircled by a golden ring, the seal shows a white rose with five petals and

tion of vernacular-language treatises had increased more and more, the translators became more and more diligent. At the end of the 17<sup>th</sup> century there was an unprecedented linguistic diversity, which was perceived by many as a Babylonian confusion.

19 Wirth, "Religiöse Herzemblematik"; Spamer, *Das kleine Andachtsbild vom 15. bis zum 20. Jahrhundert*, pp. 149–156; Dubois, "Some Interpretations of the Notion of Cœur in Seventeenth-Century France".

20 With the winged hearts, the call for change has become an image. That hearts can fly is declared by the priest during Mass: "Lift up the hearts" (*Sursum Corda*). The faithful reply: "We have them with the Lord."

21 Dimler, "Herman Hugo's 'Pia Desideria'"; Dekoninck, *Ad imaginem*; Höpel and Kuder (eds.), *Mundus Symbolicus*, pp. 59–63.

22 "When individual letters are qualified to denote not words, but the things themselves, and when all these [letters] are common to all people, then everyone would understand the writing of the various peoples even though each one would call those things by different names." (translation by the author). Hugo, *De prima scribendi origine*, p. 60.

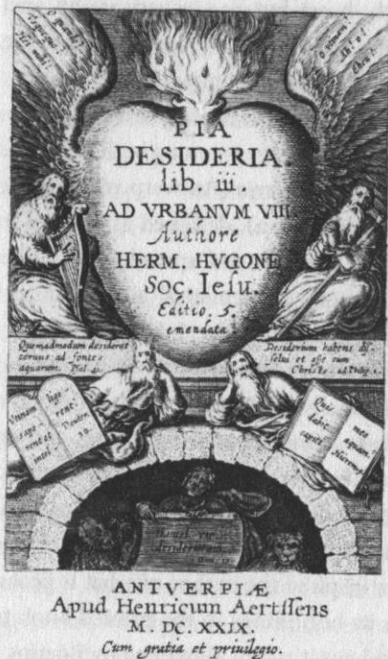


Fig. 2: Herman Hugo, *Pia Desideria*, libri III, Antwerp: Aertssens, 1629, frontispiece.

sepals, while the centre is occupied by a red heart with a black cross.<sup>23</sup> This coat of arms was known above all because it was found on the title pages of many works by Luther. Luther himself called it “a mark of my theology” (“ain merkzeichen meiner theologia”).<sup>24</sup> In fact – as shall be shown later – the heart occupies a central position in Lutheran anthropology.

### The Heart in the Janus-Faced 17<sup>th</sup> Century

From the perspective of the history of ideas and knowledge, the 17<sup>th</sup> century can be described as ambiguous.<sup>25</sup> At the beginning of the century, a new knowledge paradigm, characterized by empiricism, experimentation and intersubjectivity, began to establish itself. On the other hand, there were pictures based on analogies, symbols and signs which were often ambitious in their aim to find out what holds the world

23 Conermann, “Luther’s Rose”; Pastoureau, “Heraldique du cœur (XIIe–XVIe siècle)”.

24 Luther in a letter to Lazarus Spengler dated 8 July 1530, WA, Luthers Briefwechsel, vol. 5, p. 444.

25 Principe, *The Scientific Revolution*.

together at its core.<sup>26</sup> Even though, in retrospect, a rational and objective field of knowledge increasingly gained prominence, the alternative was always to delve into one’s own self in search of correspondences between the microcosm and the macrocosm.

It is interesting to note, at this point, that both the representatives of the objective and those of the subjective approach to knowledge eagerly resorted to the heart metaphor in order to illustrate their methods.<sup>27</sup> For example, William Harvey, who discovered blood circulation in animals and humans through anatomical studies, compared the planets orbiting the Sun and receiving life-giving energy from it to the blood circulating around the heart: “The heart, consequently, is the beginning of life; the sun of the microcosm, even as the sun in his turn might well be designated the heart of the world; for it is the heart by whose virtue and pulse the blood is moved, perfected, and made nutrient, and [the heart] is [...] indeed the foundation of life, the source of all action.”<sup>28</sup> Similarly, in his revolutionary planetary studies, Johannes Kepler, astronomer and mathematician with an affinity for the mystical, described the sun as the heart around which everything revolves.<sup>29</sup>

On the other hand, two protagonists of the alternative access to knowledge, both contemporaries of Harvey and Kepler, were Robert Fludd and Jacob Böhme. Robert Fludd was a prominent English Paracelsian physician, astrologer, mathematician, cosmologist, cabbalist and much more. In a diagrammatic representation, man is represented as a microcosm in which the heart (*cor*) corresponds to the sun (*sol*).<sup>30</sup> Another telling example can be found in the works of Jacob Böhme – the cobbler and autodidactic philosopher from Görlitz – who experienced the then still new and theologically controversial heliocentrism, with its movement of the planets around a central sun, as spiritual liberation, from which he could derive a dynamic view of the relationship between the world and humanity.<sup>31</sup> Although the expansion of the universe into the immeasurable and the juxtaposition of the small existence of human beings to the newly defined cosmos initially aroused feelings of insecurity, fear, and abandonment, Böhme succeeded in revealing direct connections to God by

26 Gloy, “Das Analogiedenken der Renaissance. Seine Herkunft und seine Strukturen”.

27 Vonessen, “Das Herz in der Naturphilosophie”.

28 Harvey, “Of The Quantity Of Blood Passing Through The Heart,” in *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*. See also Gregory, *Harvey’s Heart*; Hamraoui, “L’invention de la pathologie cardiaque entre philosophie et expérience (1628–1749)”.

29 See Rossi, *Geburt der modernen Wissenschaft in Europa*, pp. 174–175.

30 Fludd, *Utriusque Cosmi majoris scilicet et minoris metaphysica, physica atque technica historia*, vol. 2, p. 275.

31 Weeks, *Boehme. An Intellectual Biography of the Seventeenth Century Philosophy and Mystic*.



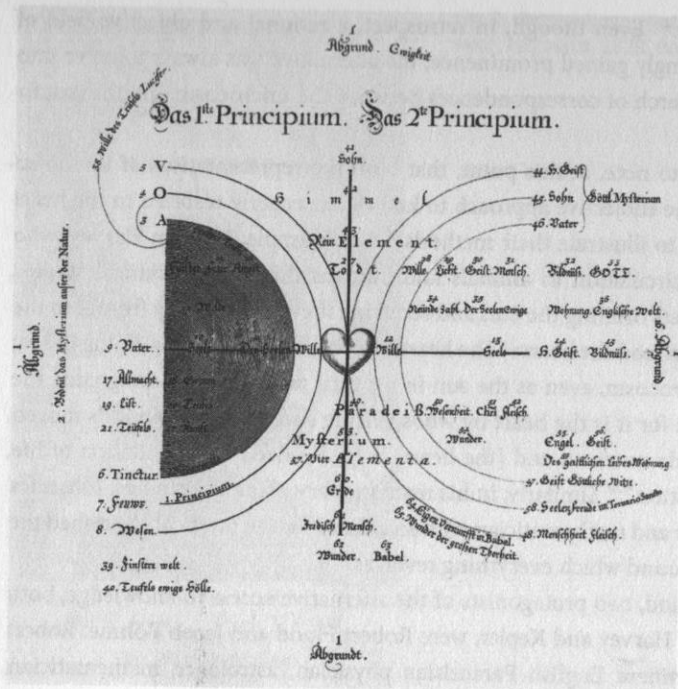


Fig. 3:  
Jacob Böhme,  
*Representation  
through a drawing  
of his Cosmogony  
in Vierzig Fragen  
von der Seele,*  
1620.

seeing the whole of divine creation at work even in the tiny components of nature. In this context, he used terms such as ‘light’, ‘sun’, and ‘heart’ almost synonymously.<sup>32</sup> There is a fascinating variety of fancy graphic interpretations of Böhme’s philosophy, but almost all of them were derived posthumously and rather speculatively from his writings by his admirers – with one exception: the geometric world model of a philosophical sphere. In the tract *Psychologia vera, oder Vierzig Fragen von der Seelen*, there is a drawing by Böhme himself next to the text (fig. 3). The whole structure can be read in three dimensions, in which the two semicircles represent hemispheres structured by a cross. In the two hemispheres, the dark and the light world face each other, separated and yet dependent on each other, since the world of light is born out of the dark by fire. The quarterings created by the cross indicate the wholeness that consists of Father, Holy Spirit, Son and – remarkably enough – Earth.<sup>33</sup> And the heart

32 Already for Cusanus, who lived one and a half centuries before Böhme, God was in everything, and everything was also in God. Ricklin, “Le cœur, soleil du corps: une redécouverte symbolique du XII<sup>e</sup> siècle.”

33 For the Christian traditionalists, it was surprising that Böhme extended the Trinity by including the earth, i.e. materiality.

is right in the middle of the cross, at the intersection between nature and God: “The heart on the juncture of the cross means the reason or the center of the deity, so that one learns to distinguish the deity from nature, and Christians learn to understand rebirth, when God was reborn for us in Christ from his heart on the cross [...]”<sup>34</sup> For Böhme, light is the heart of nature, embodied by the sun, which stands at the centre of the universe. Light is also the heart of the deity itself. Böhme’s new and original ideas – expressions of the variety of constructions of meaning of the heart, of multi-layered textures of memory<sup>35</sup> – did not find a home in Lutheran orthodoxy.

### Vial as a Tool – Vial as a Living Being – Vial as a Sign

Another type of depictions, in alchemical art, deals with a particularly rich spectrum of vessels, namely vials, glass flasks and retorts – containers that were often transparent and in which transmutations took place.<sup>36</sup> Goethe’s *Faust* conveys the impression that such equipment gives right in the opening monologue: “With boxes round thee piled, and glass, / And many a useless instrument, / With old ancestral lumber blent – / This is thy world! a world! alas!”<sup>37</sup> What these vessels and laboratories actually looked like still largely remains an open question. We do know that in the Middle Ages scholars used glass retorts and flasks in their laboratories because they made it possible to see what was happening inside. However, this seems to be contradicted by the fact that the glass of that time generally could not withstand heating for long periods of time. It is therefore assumed that the glass flasks were usually encased in a clay jacket, which of course greatly reduced the visual effect. Standard equipment for alchemical experiments seems to have been less the fragile glass vials, and more the robust retort made of copper or cast iron.<sup>38</sup>

Where does the term ‘vial’ come from? No overview of glass art is without reference to a document from 982, with which in Venice the Doge Tribuno Memmo donated the island of San Giorgio to the Benedictines. “Phiolarius Domenico”, a bottle maker, is mentioned in this document. Traditionally, the Venetian lagoon was home to a strictly regulated glassmaking trade, first in Cannaregio, and from the 13<sup>th</sup> century onwards uniquely on the island of Murano. The trade relations between Venice

34 Böhme, *Psychologia vera, oder Viertzig Fragen von der Seelen*, p. 32 (translation by the author).

35 See Franziska Metzger’s contribution in this volume.

36 Taylor, “Evolution of the Still”; Frietsch, *Häresie und Wissenschaft. Eine Genealogie der paracelsischen Alchemie*, pp. 235–285.

37 Goethe, *Faust I*, lines 53–56.

38 Forbes, *Short History of the Art of Distillation from the Beginning to the Death of Cellier Blumenthal*.



and the Islamic and Byzantine Orient led to an increase in the quality of production from which the whole of Europe profited. Bottles and beakers were the common products of Venetian glassmakers,<sup>39</sup> along with the *fiala*, an elegant, bellied bottle with a long neck.

In his writings on the production of the Philosopher's Stone, Michael Sendivogius (Michał Sędziwój) from Poland, who was considered a successful and serious gold-maker<sup>40</sup> and whose writings were read well into the 18<sup>th</sup> century, often used the term 'tool'<sup>41</sup>, distinguishing between 'tools of nature' and 'tools of art'. Natural tools were dissolving substances, such as water or mercury, as well as volatilising substances, such as fire. Sendivogius considered art tools to be an oven, called Athanor, then an "egg-shaped glass" – which is best made of a transparent, colourless material, tightly closed, and in which Mercury unites with the "Sulphur of Gold" –, as well as an "ash pot" in which the 'philosophical Egg' is to be buried.<sup>42</sup> The 'philosophical Egg', the glass vessel, looked in fact more like a pear, but since the pear had no symbolic meaning in alchemy, the adepts preferred to speak of an egg.<sup>43</sup> In such vessels, which were placed on an Athanor, the 'Mercurius' or "prima materia metallorum" swirled: "[...] put it, as it should be, in its clear, translucent and round vessel, well stuffed and closed, through the seal of the hermetic, and let it warm in its well-prepared place, imparting a tempered heat."<sup>44</sup> The purpose of the vessel is to capture the creative power of nature (*natura naturans*), and the shape of the vessel is essential.

For many alchemists, the vessel can do something wonderful: it was a *vas mirabile*. Many alchemists followed the motto "Unum est vas" ("One is the vessel"). They were convinced that the whole secret lay in the knowledge about the hermetic vessel. It follows that the alchemical vessel could not be arbitrarily shaped: as a small cosmos, it had at least to be rounded off. Sometimes, the vessel from which the Philosopher's Stone is to be born is seen as a kind of 'matrix'. Many adepts only appeared as experimenters if the vessel had an egg shape. Behind this was the conviction that the probability of the success of creative or birthing processes increased noticeably

39 Zecchin, *Vetro e vetrai di Murano. Studi sulla storia del vetro*; Barovier Mentasti, *Il vetro veneziano*.

40 The alchemist working for Emperor Rudolf II in Prague became famous when he turned a silver coin into gold before the Emperor's eyes. The emperor was so impressed that he had a commemorative plaque put up on the Hradschin: "Let another do what the Pole Sendivogius has done" (translation by the author). Szydło, *Water Which Does Not Wet Hands: The Alchemy of Michael Sendivogius*; Prinke, "New Light on the Alchemical Writings of Michael Sendivogius (1566–1636)".

41 Sendivogius, *Eines großen Philosophen fünf und fünfzig Briefe den Stein der Weisen betreffend*, pp. 70–72.

42 Ibid., p. 74.

43 Sheppard, "Egg Symbolism in Alchemy".

44 Sendivogius, *Chymische Schriften*, p. 369 (translation by the author).

Fig. 4: Johann Daniel Mylius, *Anatomia auri sive tyrocinium medico-chymicum*, Frankfurt a.M: Jennis, 1628, Pars V, p. 8.



when the shape of the vessels was based on the shape of an egg or a uterus.<sup>45</sup> In general, the relationship between alchemist and vial often appears as a meeting between two rational beings, a fascinating thing-human encounter also staged by poets: "Hail precious phial! Thee, with reverent awe,/Down from thine old receptacle I draw!/Science in thee I hail and human art./Essence of deadliest powers, refine and sure,/Of soothing anodynes abstraction pure,/Now in thy master's need thy grace impart!"<sup>46</sup>

Pictures of vessels used in laboratory practices could be found in almost every illustrated treatise on alchemy. The reader often came across schematic images in the style of technical drawings. Concerning the visual language of alchemy, the following is striking: in late antiquity and the Middle Ages, illustrations in alchemical sources were rare, and they remained largely limited to depictions of devices and simple signs. It was not until the 15<sup>th</sup> century that there started to appear sophisticated images – often in a series –, first in illuminated manuscripts,<sup>47</sup> and from the middle of the 16<sup>th</sup> century also in printed works. During this process, a very special vial, a vial as

45 Jung, *Erlösungsvorstellungen in der Alchemie*, pp. 19–20, 249–250. If the vessel had side necks in which rising vapours were deposited, it would look like a schematised pelican. See illustrations of vessels in animal physiognomies: della Porta, *De Distillationibus libri IX*, pp. 42–43.

46 Goethe, *Faust I*, lines 345–350.

47 Obrist, *Les débuts de l'imagerie alchimique (XIV<sup>e</sup>–XV<sup>e</sup> siècles)*.



a pictorial apparatus, became more and more frequently employed in these illustrations. Transparent containers provided a frame that could be filled, not with empirical but with metaphorical material. In the test tube, chemical reactions could clothe themselves in a dramatic narrative. Substances functioned as allegories, taking on the roles of figures from the Bible and ancient mythology. The main pictorial element in Johann Daniel Mylius' *Anatomia auri*, for example, is the vial (fig. 4). The twelve-step process of making the Philosopher's Stone unfolded in vivid scenes on three panels.<sup>48</sup> In the vial as pictorial apparatus, a symbolic and at the same time experimental practice of knowledge seems to have found its icon.

What may the picture of the vial signal on a general level? That natural processes require protected spaces, especially when they are recreated in the laboratory. This idea still seems valid for today's science. One only has to think of the origin of life through cell division: only when molecules come together in the nourishing environment of a cell can the components assembled there participate in the amazing dance that is called life.<sup>49</sup> An observation of modern times may lead one to conclude that glass vessels inspired Blumenberg's "postulate of visibility" ("Sichtbarkeitspostulat") of experimentally generated knowledge. The test tube, which the scientist inspects in his laboratory, rises to a heroic pictorial motif, since it is supposed to radiate transparency, neutrality and objectivity.<sup>50</sup>

As elements of series of pictures especially, vials were able to explain the transmutation stages and thus the dynamics of nature far better than texts could, especially when the goal was to keep the working steps in mind.<sup>51</sup> Through these vials, a symbolism could unfold that drew from the union of opposites. The motor of development is the conflict of opposites: solving and binding (*solve et coagula*), sublimation and condensation, Mercury and Sulphur, Moon and Sun, woman and man, all strive for unification, for *coniunctio*. Image sequences aimed to capture the production process of the Philosopher's Stone as a development of a transformation permanently kept in flux by agents. It was a matter of translating the permanent kinetic energy expressed in the dictum *solve et coagula*, since this key alchemical formula describes something

48 The transparent vial filled with image scenes became a central mode of representation in alchemical manuscripts, as well. On the one hand, the vial appeared as a pictorial form that set the frame for itself as a vessel, as in *Donum Dei*. More often, however, the vial was filled with images and was embedded in a picturesque background; particularly impressive is the splendid alchemical manuscript *Splendor Solis*.

49 Bryson, *A Short History of Nearly Everything*, pp. 368–390.

50 See postcard with Louis Pasteur in his laboratory from the year 1885. Espahangizi, "From 'Topos to Oikos'".

51 Laube, "Bilder aus der Phiole".

that is difficult to grasp: permanent volatility, i.e. the decomposition, separation or dissolution of a substance and its subsequent reassembling at a higher level. Dissolution and binding continue alternating on the ladder of transformation until one has reached the goal, namely the Philosopher's Stone.<sup>52</sup> Vials reflect nature, which is permanently dynamic. Vials can thus become elastic bubbles.

### Vascular Structures and Metaphors

A vessel is far more than just a thing. One need not think immediately of the miraculous vessel of the Grail in the legendary tales of the Middle Ages or the mischievous Pandora's box from antiquity.<sup>53</sup> In the thinking of Martin Heidegger, Ernst Bloch and Georg Simmel, the vial seems to be a type of thing particularly suitable for concretizing philosophical thoughts.<sup>54</sup> For Heidegger, the container seems to be the thing summarizing everything. The observation of the jug leads him to reflect on the relationship between heaven and earth, mortal and divine, condensed the object that has four dimensions (*Geviert*).<sup>55</sup> As containers and conveyors, these things acquire an ambivalent structure between the inner and the outer, between form and content, between visibility and concealment.

Containers are perfect objects for metaphorical thoughts. Human beings seem to be vessels that, from the very beginning, were destined to absorb something. The interaction between inner and outer surface invited metaphorical considerations. Since Plato's time, ancient philosophy presented the body as the vessel of the soul or spirit. The Bible speaks of a creating God who sees himself as a potter moulding human vessels.<sup>56</sup> Human beings are designed so that their inner being must be filled to not feel empty. In a passage in Genesis 2:7, "then the Lord God formed man from the dust of the ground", in Hebrew 'formed' is *yatsar*, a word that expresses especially the moulding of a vessel in the hands of a potter. Gender connotations were often dominant when speaking of vessels: women were considered vessels of life or of the male reproductive power.

52 Even though the detailed chemical transformation process shows a wide range of variation, and in this respect there are hardly two alchemists who follow exactly identical instructions, all experiments are characterized by a typical procedure. One distinguishes four – later three – phases, which differ in colour: melanosis (blackening), leukosis (whitening), xanthosis (yellowing), iosis (reddening).

53 Egeler, *Der heilige Gral. Geschichte und Legende*; Dora Panofsky and Erwin Panofsky, *Pandora's Box*.

54 Simmel, "Der Henkel. Ein ästhetischer Versuch [1923]"; Bloch, *Geist der Utopie*.

55 Heidegger, "Das Ding [1950]". See also Harman, *The Quadruple Objects*, pp. 82–95.

56 Rom. 9:20–21.



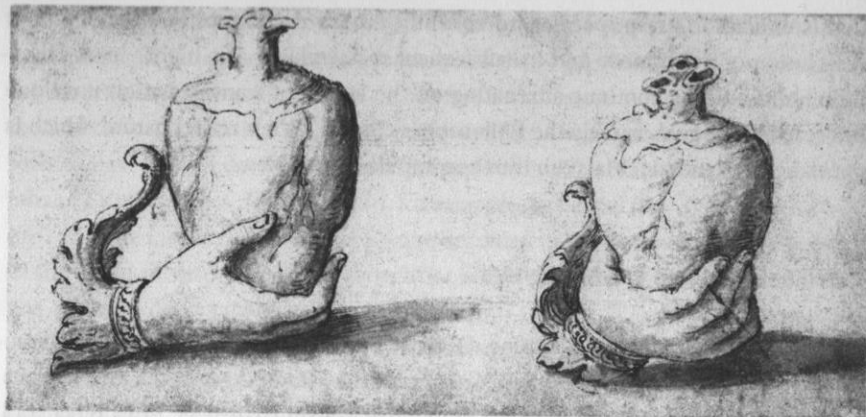


Fig. 5: Drawing of an anatomical heart, lateral and three-quarter views. Pen and ink drawing attributed to Giulio Romano or one of his followers, between 1500 and 1599 (Rome?), London, Wellcome Library, no. 271001.

As mentioned above, vessels were essential for the core process of alchemy – distillation. The technical term for the container in alchemical sources is *vas hermeticum*. Even today, the word ‘hermetic’ is still used to describe something firmly closed. The strict demarcation of outside and inside, of everyday life and experiment, was essential for the transmutatory process. Nothing should enter from the outside, nor should anything escape from the inside.<sup>57</sup> The heart as an organ was also seen as having a housing structure consisting of different chambers.<sup>58</sup> In the 16<sup>th</sup> century already, the anatomical heart was drawn like a vessel, held by a hand (fig. 5).<sup>59</sup> This resulted, with the emblematics, in the human heart with a stylized aorta that acts as a divine channel allowing the entry of the Holy Spirit. The fact that the heart was often depicted as a vessel suggests a number of idioms. In German, for example, one speaks of “pouring out one’s heart” (“Herz ausschütten”) or of an “overflowing heart” (“überquellenden

57 Jung, *Erlösungsvorstellungen in der Alchemie*, pp. 19–20. It is not uncommon for alchemical knowledge to convey bold theories of creation. From the riddle of transmutation, whole philosophical constructions of thought and worldviews could be deduced. The earth was a large distilling vessel which had been made by the omniscient Creator with his own hands, a Creator emulated by all alchemists, especially the followers of Paracelsus.

58 For Aristotle, the heart is the starting point of the vessels, and the actual seat of the force by which the blood is first fabricated. Ada Neschke-Hentschke, “Le rôle du cœur dans la stabilisation de l’espèce humaine chez Aristote”.

59 The spout of the vessel is shown in the picture (fig. 5) on the right as having three orifices, representing the superior vena cava, the aorta and the trunk of the left and right pulmonary arteries. See also the drawing from Leonardo da Vinci’s notebook of anatomical studies: Laurenza, *Leonardo. Anatomie*, p. 157 (fig. 49) and Vesalius, *The Heart and Associated Organs*, vol. 6 of *On the Fabric of the Human Body*.

Herz”). The Bible says: “For out of the abundance of the heart the mouth speaks.”<sup>60</sup> The heart seemed to be an excellent container.

#### Heart and Vial as Interacting Vessels between Body and Soul

The image of the heart and vial creates a separate pictorial field, a frame within the frame, as it is already known in the history of art from the window or mirror motif. With the help of allegories, a stage opens up that makes it possible to see something that is actually barely visible or completely invisible. Such a vessel as pictorial apparatus is of interest to the visual sciences because it deals with natural knowledge or inner contemplation by visual means – a hieroglyphic symbol of the path of salvation –, on the one hand more from the perspective of matter, on the other hand rather from the perspective of soul. In alchemy, the transmutation process is driven by tiny particles. At several stages, it is supposed to create polar tensions pushing for unification.<sup>61</sup> In piety – whether Catholic or Protestant – processes of inner purification based on the Holy Scriptures are in the foreground, demanding visualization. And the heart as vessel provides the perfect pictorial symbol for this.

As the devotion to the Sacred Heart spread, so did the imagery, appearing in every kind of medium. Particularly inventive is Antonius Wierix’s series of engravings entitled *Cor Jesu amanti sacrum*, published in Antwerp (1585).<sup>62</sup> In this series, the soul is symbolized by a heart, which the Child Jesus, as the personification of divine love, makes pious by purifying it; Child Jesus then instructs it before uniting himself with it. Another example, from the opposite confessional side, can be found in Daniel Cramer’s *Emblemata Sacra* (1617), the first complete series of heart emblems from the Protestant environment.<sup>63</sup> In it, the heart is combined with other pictorial motifs or, in other terms, spaces of memory: hearts in fires, pierced by arrows or swords, with wings, on pillars in the sea, chained to a coffin; hearts from which flowers, wheat, trees or crosses grow; hearts weighed on a scale, balancing on a pyramid, etc. Through heart motifs, Cramer mostly visualized aphorisms from the Bible. In the twelfth emblem, for example, he uses the saying “Blessed are the pure in heart, for they will see God.”<sup>64</sup>

60 Matt. 12:34.

61 The Philosopher’s Stone was neither made of stone nor gold; it was usually described as highly compacted reddish powder. It would have been simple to depict it in this way, but the visual language of alchemy took another direction.

62 Emblem 5, 7, Wierix II, *Cor Jesu amanti sacrum* (1585); Dekoninck, *Ad imaginem*, pp. 361–362.

63 Mödersheim, ‘*Domini Doctrina Coronat*’: *Die geistliche Emblemata Daniel Cramers (1568–1637)*.

64 Matt. 5:8.

In the accompanying medallion, which occupies almost the entire page, there is a view of the city in the background, and in the foreground a heart with eyes, placed on the ground, as it is being watered with a jug held by a hand descending from the sky (fig. 6). At the same time, the eyes of the heart are directed towards the sun, marked with the Hebrew letters for *Yahweh*. The unusual picture, which nevertheless depicts everyday work in the garden, serves as a reminder to the viewer to keep the famous biblical saying present. The title of the German translation from 1622 mentions explicitly *Deutungsbilder*,<sup>65</sup> i.e. symbols that visualise a proverb or a conceptual context. In any case, this emblematic mechanism of memory between image and writing goes far beyond the 6<sup>th</sup>-century view of Pope Gregory I, according to whom images convey to the ignorant what writing reveals to the knowledgeable.<sup>66</sup> Emblematic knowledge appeals to the emotions and adheres particularly well to memory. At the same time, the image is already part of a rational process of abstraction.

In the Lutheran conception of human being, the term 'heart' or *cor* occupies a central position. Thus, it is also possible to present the central dogmas and doctrines of Lutheran theology through emblems with a heart metaphor.<sup>67</sup> Cramer's visual references to the heart bring the dry, abstract knowledge of theology to life. With the increasing establishment of the Lutheran Reformation, an academic theology with a focus on dogmatic debate emerged in the 16<sup>th</sup> century. Against this academic theology in Lutheranism, a more or less strongly spiritualistic piety movement gradually developed, came to the surface in around 1600 with Johann Arndt, and at the end of the century led to Pietism.<sup>68</sup> Nevertheless, all statements that Cramer makes in his emblems about human beings – their 'heart' as their inner being – thus stand in a clearly defined theological context, without however making them unacceptable to readers of other denominations. Nevertheless, the first edition of Cramer's *Emblemata Sacra* made its demarcation from the Jesuits explicit in the wording of the title.<sup>69</sup> The striking closeness between a gradually emerging pietism and Jesuit religiosity was to become apparent in the course of the 17<sup>th</sup> century, especially in the practices of piety around the heart.<sup>70</sup>

Besides this, the Protestantism of that time had still quite different inflections. At the beginning of the 17<sup>th</sup> century, Protestantism developed in a direction that cast

65 Cramer, *Emblemata Sacra*.

66 Brakensiek, "Emblematik und Bildtheologie", pp. 366–367; see also Grove, "Emblem and Impact".

67 Mödersheim, 'Domini Doctrina Coronat': *Die geistliche Emblematik Daniel Cramers (1568–1637)*.

68 Wels, *Manifestationen des Geistes*, pp. 13–55; Sträter, "Wie bringen wir den Kopf in das Hertz?".

69 Cramer, *Societas Jesu et Roseae Crucis vera*.

70 On Christian Hoburg's *Lebendige Hertzens-Theologie*, see Heijting, "Christian Hoburg's *Lebendige Hertzens-Theologie* (1661)"; from the Jesuits' perspective, see Rai, "Spotless Mirror, Martyred Heart".

EMBLEMA XII.  
Beati mundo corde, quoniam ipsi Deum videbunt.  
Matth. 5. 8.  
Selig sind die reinen Hergen findt / denn sie werden  
Gott schauen.

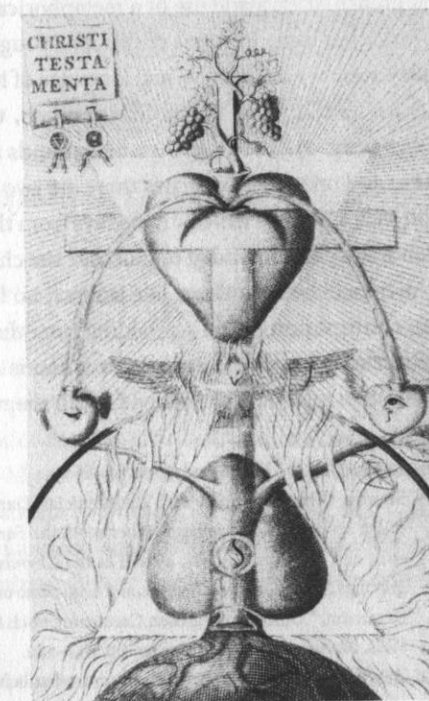


O ter anima beata, cui hic venit imber ab alto:  
Nam carnes oculus ipsa Deum atthereis.

Fig. 6: Daniel Cramer, *Emblemata Sacrorum*. Secunda Pars: Das ist: Fünffzig Geistlicher in Kupfer gestochener Emblematum in Kupffer gestochen auß der h. Schrifft (...), Frankfurt am Meyn: Jennis, 1624, p. 61.

Fig. 7: Theopheil Schweighardt [Daniel Mögling], *Speculum Sophicum Rhodo-Stauroticum* Das ist: Weitläuffige Entdeckung deß Collegii unnd axiomatum von der sonders erleuchten Fraternitet Christ-RosenCreutz (...), (s.l.) 1618 (frontispiece).

Fig. 8: *Christi Testamenta*, Jacob Böhme, Theosophische Wercke, Amsterdam 1682.





doubt on the credibility of Christian doctrines exclusively related to texts. Theology and natural history under the sign of the heart entered into a symbiosis with Rosicrucianism, which was strongly influenced by the Paracelsian philosophy.<sup>71</sup> On the frontispiece of Theophil Schweighart's (i.e. Daniel Mögling) *Speculum sophericum rhodo-stauroticum*, two female personifications face each other in niches under the motto "Ora et labora" (fig. 7). The personification on the right, embodying theology, holds a heart in her right hand which is marked with the letters "A - Ω", "Z" and "7" (=Azoth for the elixir of life). The one on the left, who embodies physiology, holds a flaming heart.<sup>72</sup> The extraction of the divine spirit from matter is the alchemical *parergon*, the "preliminary work" which is followed by the enlightenment by the divine spirit in prayer in the *ergon*, the "actual work". With this assumption of a divine action in matter, Paracelsianism expresses itself as a specific form of natural piety that consciously and provocatively transcends the limits of confessional theology.<sup>73</sup>

Deterred by the subtleties of Lutheran orthodoxy, more and more Protestants saw reading the Book of Nature as an alternative to the pure belief in Scripture. This new approach often made use of a metaphorical language inspired by alchemy. The visual world that Jacob Böhme's philosophy sought to translate in the course of the 17<sup>th</sup> century seems to unite the visual language of heart and vial.<sup>74</sup> The heart of nature, upside down and burning in the fire of wrath, touches the radiant heart from the world above (fig. 8). The lower heart surrounds a tree trunk, which grows from within nature and on whose branches there are two winged, eyed hearts drawn as vessels, one on each side, into which divine rays from the upper heart flow.<sup>75</sup> For some people, the laboratory was intended to illustrate the changes and cleansing that took place within the human being; others, like Böhme, no longer needed a laboratory at all, and built an entire philosophical scaffolding from the fascination of transmutation. For Böhme, the search for the Philosopher's Stone is a spiritual process that is fulfilled in the Christian rebirth of the individual, in the reintegration of the fallen Adam.

71 Eidighoffer, *Die Rosenkreuzer*, pp. 22–26.

72 Simons, "The Flaming Heart". The physician Daniel Mögling, who was fascinated by the manifestos of the so-called Rosicrucian Brotherhood, the *Fama Fraternitatis* and the *Confessio Fraternitatis* from 1614 and 1615 respectively, as well as the *Chymische Hochzeit* of 1616, added remarkable copper engravings to the *Speculum Sophericum Rhodo-Stauroticum* (The Mirror of the Wisdom of the Rosy Cross). Neumann, "Olim, da die Rosen Creutzerey noch florirt, Theophilus Schweighart genant".

73 Wels, *Manifestationen des Geistes*, pp. 234–252.

74 Zuber, "Thesophische Spekulation und erbauliche Frömmigkeit". The theologian Adolf von Harleß already pointed out in the 19<sup>th</sup> century that the content of his works, put into words by Böhme, can be traced back to the sequences of pictures in which the vial played a leading role. Von Harleß, *Jakob Böhme und die Alchymisten*.

75 It is obvious that the heart bearing an eye refers to the inner eye. Geissmar, *Das Auge Gottes*.



Fig. 9a and 9b: [Paul Kaym/Nicolaus Häublin]. *Helleuchtender Hertzens-Spiegel* (...), Amsterdam/Danzig, 1680, frontispiece, p. 22.

In works by nonconformist Protestants, the form of the heart in its various variations is prominently represented, such as the simple central heart, the fiery heart.<sup>76</sup> Paul Kaym, imperial customs collector in Liegnitz and author of eschatological books, who exchanged views with Böhme on the question of the time of the beginning of the apocalypse, is considered to be the author of the lavishly illustrated *Helleuchtender Hertzens-Spiegel* ("Bright, Shining Heart-Mirror"), in which the heart is shown as a transparent vessel.<sup>77</sup> On the title page, there are two hearts within one big heart serving as frame (fig. 9a). In the first one, the Lamb of God is placed on a rock in the surf with the inscription "The New Birth". Significantly, the heart of the shadow world be-

76 Flames appear from the heart. Folk texts know that love can burn. In the image of the heart, the feeling is made vivid. The blazing fire expresses extreme devotion. See Simons, "The Flaming Heart".

77 This compilation of devotional texts by mystical authors from the late Middle Ages, such as Johannes Tauler, appeared posthumously in 1680. Geissmar, *Das Auge Gottes. Bilder zu Jakob Böhme*, pp. 47–48; Schott, *Magie der Natur*, pp. 36–37.

low, reading “The Old Birth”, is upside down. The treatise became known through the sixteen heart diagrams probably designed by Nikolaus Häublin – remarkable compositions, some of which seem almost surrealistic (fig. 9b). Its main theme was the heart as a virtual stage to unfold the contrast, or rather the reciprocal relationship between the light and shadow worlds. Salvation forces descend through an opening in the sky, and are allegorically visualized in the individual chambers of the heart. The sequence of images describes the path of the heart to mystical enlightenment.

### Some More Divergences and Convergences

What became a theme in spiritual emblematics through the heart in all its variations is the exuberant and demanding love of God as well as humans’ attempts to do justice to these offers of love. As one can see from Anton Wierex’s heart series of 18 engravings, the human heart is like a fortress against the hostilities of the devil. The situation only changes when the divine child enters the heart.<sup>78</sup> The child uses the heart as a place of learning. He establishes a treasure of grace in it and paints in it pictures of the last four things – death, judgment, heaven and hell (fig. 10).<sup>79</sup> The motif of the infant also refers to the fact that the infant opens up the world with the help of pictures.<sup>80</sup>

Whereas love is sexless or infantile in the heart series, the entire creative process of the vials is often staged as a union of the sexes, sometimes even as coitus. In alchemy, what is symbolized by a vial is the build-up of erotic tension between the substances of nature; hence the juxtaposition of man and woman, who embody different material principles, namely sulphur and mercury. Their union brings about a refinement of matter and, at the same time, a healing of the human being. Allegorically, transmutation found its crowning conclusion in the union of man and woman, in the reconciliation of sexual dualism. In the versions of *Donum Dei*, a pictorial manuscript compiled from the 15<sup>th</sup> century,<sup>81</sup> the erotic meeting or copulation of a naked human

78 Newman, “Love’s Arrows: Christ as Cupid in late Medieval Art and Devotion”.

79 Certainly, the content of the emblem was sometimes not self-explanatory. Rather, the emblematicist thought that deciphering the emblem helped with the memorization of it. On the other hand, the solution to the puzzle should not be too difficult. Daly, “Emblem and Enigma. Erkennen und Verkennen im Emblem”.

80 Bannasch, *Zwischen Jakobsleiter und Eselsbrücke*; Laube, “Dinggedächtnis. Johann Amos Comenius’ ‘Orbis pictus’ (1658)”.

81 The booklet with the title *Donum Dei* from the Herzog August Bibliothek Wolfenbüttel has a very inconspicuous appearance. It is only fifteen centimetres high and eighteen parchment sheets thin. The manuscript is not only remarkable because it describes in twelve steps how to get to the Philosopher’s Stone or because it is so richly illustrated. The manuscript is remarkable above all because it presents



Sume IESV penicilla. Sic nec Venus prophanabit,  
Cory totum confribilla. Nec Voluptas inquinabit  
Pis imagnibus: Vani phantasmatus.  
Anton. Wierex fecit et excol.

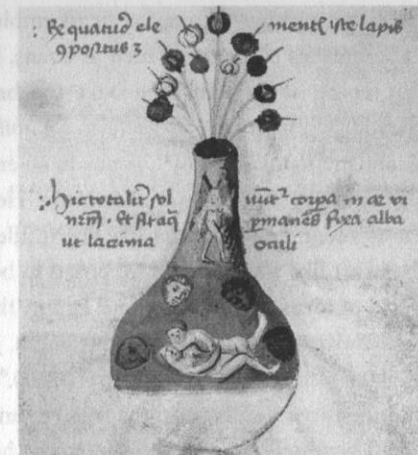


Fig. 10: Anton Wierex II, *Jesus paints the last four things in the human heart*, Engraving. Published by the artist. 1 of 18 plates of the *Cor Jesu amanti sacrum*, Antwerp 1595.

Fig. 11: *Donum Dei*, Pergamenthandschrift, 15. Jahrhundert.

couple celebrating a ‘chymical wedding’ (‘chymische Hochzeit’) catches the eye (fig. 11). Rarely had the sexual act been portrayed so plainly. Salacious subjects were allowed when the sexual act was not to be understood literally. Rather, the *coniugatio*, *coniunctio*, or even *coniugium* of philosophical mercury and sulphur is the key idea behind this. Just as man is made of semen and blood, so gold can only come from mercury (menstruum) and sulphur (sperm).<sup>82</sup> Alchemy is strikingly characterized by gender analogies. On a terminological level especially, female traits are expressed, for instance in the use of the words, *matrix*, *uterus* or *menstruum*. The earth and its interior is a living being, a mother to be described through gynomorphic metaphors. The religious scientist Mircea Eliade has pointed this out emphatically. Through ritual behaviour and technical skills, human beings are able to release raw ores from the uterus of the earth. In the context of *terra mater* and *petra genitrix*, Eliade even speaks of “The World Sexualized” in a chapter heading.<sup>83</sup>

pictures in the form of a vial. According to the twelve-tiered *Opus Magnum*, twelve different vial pictures are shown. Limbeck, “Das Opus magnum in zwölf Bildern”.

82 According to Petrus Bonus in his *Margarita pretiosa novella*, published 1546 in Venice.

83 Eliade, *The Forge and the Crucible*, p. 34.



In the spiritual-theological heart emblematics, one will occasionally come across the requisites of alchemy, such as ovens, bellows or retorts – since it was necessary to prepare, shape and even bake the heart. The Nuremberg poet Georg Philipp Harsdörffer, with whom the term *Sinnbild* originated,<sup>84</sup> took up the heart, in Protestantism popularized by Cramer, as an emblem motif in his tract *Hundert Geistliche Hertzens-Siegel* (“A Hundred Spiritual Heart-Mirrors”), published in the middle of the 17<sup>th</sup> century.<sup>85</sup> In it, vial-like hearts filled with pictures of scenes play a major role – the heart like a seal that is supposed to be impressed on the viewer (fig. 12). In the world of ideas of the *Sturm und Drang*, the metaphor “heart of glass” emerged.<sup>86</sup> In the handwritten version of a heart poem, Jakob Michael Lenz writes “my heart melts to glass” (“schmelzt mein Herz zu Glas”).<sup>87</sup> The heart no longer stands only for unity and identity now, but also for fragility and brokenness. Just as the vial, originally a lifeless artefact, can come to life, so the heart, originally a source of life for humans and animals, can stop and become an artefact.

On the other hand, it is just as possible to encounter the heart in the pictorial language of alchemy.<sup>88</sup> And sometimes, the heart appears in picture and word. In the famous alchemical illuminated manuscript *Aurora consurgens*, attributed to a pseudo-Thomas of Aquinas, the alchemist prepares for the charity of God: “Know that you cannot have this science until you purify your mind for God, that is, wipe out all corruption in your heart.”<sup>89</sup> The heart stands here for a knowledge that arises from divine inspiration, which is only incorporated by the adept when he proves that he is worthy. The illustration shows two figures, the one on the right offering their heart from within their body (fig. 13). As the symbol of the invisible, the driving force behind the material itself and the elements, the heart contains the entire process of natural creation and artificial alchemical transformation. In this picture, the heart actually has the same origin as the excrements represented by the figure on the left: faeces, urine, spit, hair – four different kinds, as the elements. But while the second figure refers to the common and ordinary nature of the work, which can be found everywhere, the heart, which is only made visible by breaking the integrity of the body, reveals the pure, hidden matrix underlying the elements.<sup>90</sup>

84 Höpel, *Emblem und Sinnbild. Vom Kunstbuch zum Erbauungsbuch*, pp. 165–166.

85 Arthyus (= Georg Philipp Harsdörffer), *Das erneuerte Stamm- und Stechbüchlein*.

86 Scholz, “Jakob Michael Reinhold Lenz: An mein Herz/Unser Herz/An das Herz”.

87 Langen, *Der Wortschatz des deutschen Pietismus*, pp. 71–72, 411 (translation by the author).

88 Pereira, “Il cuore dell’alchimia”.

89 Ps.-Thomas Aquinas, *Aurora consurgens*, I, X, 5, quoted by Morosow, *Erbe des Nikolaus von Kues*, p. 97 (translation by the author).

90 Pereira, “Il cuore dell’alchimia”, p. 300.

Fig. 12: Fabianus Arthyus [= Georg Philipp Harsdörffer], *Das erneuerte Stamm- und Stechbüchlein: Hundert Geistliche Hertzens Siegel/ Weltliche Spiegel/Zu eigentlicher Abbildung der Tugenden und Laster vorgestellt/ und Mit hundert Poetischen Einfällen erklärt Durch Fabianum Athyrum, der loblichen Sinnkünste Befleißnen*. Nürnberg: Fürsten, 1654, p. 309.



Fig. 13: *Aurora Consurgens*. Zürich.



Alchemy as art consisted of a practical and a speculative element. For the alchemist, working with matter was by no means exclusively pure handicraft; he saw it rather as a way to perfect his own soul. Paracelsus spoke of a lower and an upper alchemy: on the one hand, there was the concrete herbal and metallurgical work, which was to provide valuable foundations for chemistry and pharmacy; on the other hand, the transformation of the elements became a mirror of spiritual purification.<sup>91</sup> Alchemy became a religious service. In the most extreme case, the Philosopher’s Stone, which dissolves itself in the transformation from impure matter to pure gold, could refer to the resurrection of Christ.<sup>92</sup> The Church must have felt challenged, if the adept thought he could act like God and imitate creation.

91 That true transmutation is spiritual transmutation was also the core concern of the famous psychological alchemy interpretation by Carl Gustav Jung, who identified archetypes of humanity in the pictorial figures of alchemy.

92 This parallel is clearly expressed in the alchemical manuscript *Buch der heiligen Dreifaltigkeit* (Book of the Holy Trinity), when it speaks of a “medicine of Jesus Christ” to be received.



Fig. 14: Giambattista della Porta, *Magiae naturalis libri viginti*, Leiden 1644, frontispiece.

### Memory as Glue Between Material Union and Spiritual Love

Heart and vial are quite similar in their shape: the heart tapers at the bottom, the vial at the top. Sometimes, heart and vial appear altogether, as on a frontispiece that precedes the *Magia naturalis* of Giambattista Della Porta (fig. 14). Sun rays form a straight vertical line from the sun to the vessel in the middle and to the heart at the bottom. In the early modern pictorial tradition, heart and vial seem to behave complementarily. When it comes to the inner transformations of human beings and nature, the heart seems to be more responsible for the subjective-spiritual, the vial more for the objective-material. For a long time, in theology, the heart symbol was purely spiritual. It was only in the 20<sup>th</sup> century that Pierre Teilhard de Chardin developed a cosmic-theological explanatory framework that took account of the material dimensions of the heart metaphor.<sup>93</sup> This entanglement of materiality and spirituality had been achieved by the vial much earlier. Descartes, Newton and mechanistic philosophy only gave the thing expansion and mass. For the pictorial language of alchemy, the difference between inner essence and utterance is fundamental in any material

93 Teilhard de Chardin, *Das Herz der Materie. Kernstück einer genialen Weltansicht*.

configuration. The things of nature have a deeper meaning, which is expressed by external signs, and the adept can read these signatures of nature. Be that as it may, heart and vial emblematics are a means of expression for inner processes that are not sensually perceptible. The *ars memorativa* of places (*loci*) and images (*imagines*), firmly anchored in the rhetorical canon of antiquity,<sup>94</sup> also applies to vials and hearts, especially when they are part of image sequences. Bearing in mind that pictures are easier to remember than texts, complex meditative exercises in dialogue with God or nature can be internalized. Certainly, the common feature of the heart and vial picture series is that both generate an easy-to-remember meaning on an allegorical level. Spiritual transformations in the heart chambers, chemical reactions in the test tube, dressed in a dramatic pictorial narrative, could only be comprehended if one was familiar with the meaning of pictorial signs.

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## Images

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- Drawing of a anatomical heart, lateral and three-quarter views. Pen and ink drawing attributed to Giulio Romano or one of his followers, between 1500 and 1599, Rome?, drawing: black chalk, pen and brown ink and brown wash, sheet 8 × 17.9 cm. London, Wellcome Library, no. 27100i (fig. 5).
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- Juriaan oder Jurr Pool, *Anatomics among themselves with a heart*, 1699, oil on canvas, 74 × 117 cm, Leiden, Museum Boerhaave. Reproduced in *Das menschliche Herz – Der herzliche Mensch*. Begleitbuch zur Ausstellung "Herz" vom 5.10.1995 bis 31.3.1996 im Auftrag des deutschen Hygiene-Museums. Ed. by Susanne Hahn, Dresden/Basel: Verlag der Kunst, 1995, p. 9 (fig. 1).
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Erinnerungsräume. Geschichte – Literatur – Kunst  
Herausgegeben von Franziska Metzger und Dimitar Daphinoff

Band 2

Franziska Metzger / Stefan Tertünte (eds.)

# Sacred Heart Devotion

Memory, Body, Image, Text –  
Continuities and Discontinuities

BÖHLAU VERLAG WIEN KÖLN WEIMAR