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THE NATURAL HEBREW ALPHABET ACCORDING TO FRANCIS MERCURY VAN HELMONT

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RÉSUMÉ : Dans cet article nous examinons l'ouvrage de François Mercure van Helmont (1667) consacré au caractère naturel de l'alphabet hébreu devant permettre aux sourds d'apprendre à parler. Son essai s'oppose à la philosophie hermétique et aux idées linguistiques en vigueur à l'époque aux Pays-Bas. On prêtera une attention particulière aux observations phonétiques tout à fait intéressantes effectuées par Van Helmont.

MOTS-CLÉS : Alphabet hébreu, la tradition hermétique, l'enseignement des sourds à parler, observations phonétiques

ABSTRACT : This paper discusses the work of Francis Mercury van Helmont (1667) on the natural character of the Hebrew alphabet, by which he aimed at teaching the deaf to speak. His essay is placed against the hermetic philosophical background of his days, as well against the linguistic ideas prevailing in the Low Countries of his days. Special attention is given to the valuable phonetic observations of Van Helmont.

KEY WORDS : Hebrew alphabet, hermetic tradition, teaching the deaf to speak, phonetic observations

The natural Hebrew alphabet according to Francis Mercury van Helmont

1. INTRODUCTION

In 1667 Franciscus Mercurius [Francis Mercury] van Helmont (1614-1698) published a booklet *Alphabeti vere naturalis hebraici brevissima delineatio quae simul methodum suppeditat, juxta quam qui surdi nati sunt sic informari possunt, ut non alios saltem loquentes intelligent, sed & ipsi ad sermonis usum perveniant*, which title has been translated into English in a contemporary source as *A Most Compendious and truly Natural Draught of the Hebrew Alphabet, which at the same time furnishes a method whereby those who are born deaf may be so informed that they may not only understand others speaking but also may themselves arrive at the use of speech* (Coudert 1999, p.59).
In the same year and in the same small German place Sulzbach a German edition of the same work came out, translated by the Hebraist and Christian Kabbalist Christian Knorr von Rosenroth. Thirty years later Van Helmont's work, nowadays generally known as *The Alphabet of Nature* or more correct *A Short Sketch of the Truly Natural Hebrew Alphabet* (Coudert 1999, p.59 & Van Helmont 2007), was still considered to be so important that a Dutch edition was published, together with a manual of J.C. Amman, the Swiss-Dutch physician, phonetician (Jongeneelen 1994) and founding father of the education of the deaf, in which Amman did not suggest a sign language, as is common nowadays, but a system of lip reading.
Several years after his death his friend Leibniz described Van Helmont and this booklet in an essay of 1711:

> I believe there is a reference…to the late Mr. van Helmont, the younger, who was a prisoner of the Inquisition at Rome and who took it into his head, in his solitude, to examine the function of the organs in pronouncing letters and thought he had found how these characters are formed. I have known the same person unusually well, and I must do him the justice of saying that…his conduct was without reproach, his actions were full of charity and disinterestedness. Except for certain chimeras which remained with him from the impressions of his youth like a hereditary illness, he was an excellent man whose conversation was very instructive to all who could benefit from it. His works reveal only that part of him which was least praiseworthy.[1]

Although Leibniz makes a single reservation, he highly appreciated Van Helmont and his work, as is also clear from the epitaph he wrote after Van Helmont's death (Brown 1997, p.110). However, it may look strange that a person as Van Helmont who apparently believed to have found a magical force in the Hebrew alphabet so that it could be used to teach the deaf to speak, was held in high esteem by a rational philosopher such as Leibniz, one of the fathers of modern logic. Before we will turn to this aspect, first a few words about Van Helmont and his background.

2. ALCHEMIST, PHYSICIAN AND NATURAL PHILOSOPHER

Francis Mercury van Helmont was born in Vilvoorde[2], a little Flemish town in the shadow of Brussels as son of Jean Baptist van Helmont (1579-1644), a world famous physician, outstanding iatrochemist and a follower of Paracelcus, and thus an anti-Galenic in his medical practices. J.B. van Helmont's work and ideas became so influential that a term 'Helmontianism' for a more purified and more radical form of 'Paracelsianism' was introduced (Elmer 2004, p.108). He was an alchemist and also founded a discipline that has

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[1] Translation by Leroy E. Loemker (1956), quoted from Merchant (1979, p.172).
[2] See for full biographical details Coudert (1999) and Brown (1997) and also Sherrer (1938). Most of the biographical information given here goes back to Brown (1997) and Coudert (1999).

Camiel Hamans

been called 'pneumatic chemistry', in which field he introduced and coined the word *gas*, that he derived from the Greek *chaos*. Van Helmont sr. had little liking for the standard education of his days and therefore kept his son at home and taught him himself. Later on Francis used to assist his father in his experiments.

After his father's death Francis went to Amsterdam where he published his father's writings and met among others Franciscus van den Enden, teacher and friend of Spinoza (Israel 2001, p.170). In the Netherlands he also met members of the German nobility, especially the Palatine family who lived there in exile. This brought him to a career as a diplomat. For years he travelled through Europe as an emissary of German noble men and women. On his way over the continent and to England he met several still famous scholars, philosophers and religious leaders. He met the English king, was friends with such opposite figures as Locke and Leibniz, who corresponded via him, made friends in the Royal Society, was befriended with the Cambridge Neo-Platonist Henry More, collaborated with Quakers, was a member of a Rotterdam-based group of free thinkers the "Latern", in which among others Pierre Bayle played a role, and planned a translation of a book by Comenius. His frequent travels gave him the nickname of a 'scholar gipsy'(Brown 1997, p. 7, Merchant 1979, p.171) or 'wandering eremite'(Coudert 1999, p.21).

Francis Mercury van Helmont was so successful as a diplomat that he received a Patent of Nobility from the Austrian Emperor Leopold in 1658, which made him a baron. Alongside his activities as a diplomat he was practicing as a physician, in which quality he had such a good name that the British Neo-Platonist philosopher Lady Anne Conway invited him to become her court physician.

3. Inquisition

Nevertheless he managed to end up in prison. It happened in the days he stayed at the court of Christian August, Count Palatine of Sulzbach, with whom he collaborated to modernize the county. Sulzbach just struggled to overcome a period of religious animosity and persecution. Christian August and his main advisor Van Helmont worked on religious tolerance and therefore as well as for economic reasons, they invited foreign craftsmen to come to Sulzbach, especially people who were persecuted elsewhere; among them also Jews. Van Helmont advised the sovereign to give up luxury and to introduce the study of Hebrew. This was to the chagrin of the neighbouring Roman Catholic counts, princes and archbishop and so they convinced Rome to accuse Van Helmont, although officially he was a Roman Catholic. He was sent to Rome where he spent eighteen months in the dungeons of the Inquisition (1661-1663). Part of the indictment was Van Helmont's 'Judaism'.

In the cell he wrote his *Alphabet of Nature*, as the frontispiece to the *Alphabeti vere naturalis Hebraici brevissima delineatio* shows: a man sitting in front of a mirror and a blank sheet of paper, measuring the opening of the mouth with a pair of compasses and keeping a pencil prepared in his other hand.

Some of Van Helmont's German noble friends applied so much pressure to the Inquisition that he was released and could bring the manuscript with him to Sulzbach, where he continued to be an advisor to Christian August for some time. Shortly after he was back at the court of Sulzbach, Van Helmont invited the protestant scholar, alchemist, statesman and Cabbalist Christian Knorr von Rosenroth to join him. In 1668 Knorr became 'Hoffkanzleirat', Chancellor, of Count Christian August. Knorr stimulated Van Helmont to publish his work, produced an introduction to the Alphabet and translated the whole work into German. The two 1667 editions were printed by a press financed by Christian August, Knorr and Van Helmont together.

The natural Hebrew alphabet according to Francis Mercury van Helmont

4. HERMETIST AND CABBALIST

Unlike Van Helmont who published relatively little, Knorr was a very productive author. In 1667/8 he published, with the assistance of Van Helmont, the *Kabbala denudata*, a collection of basic esoteric treatises in which he included a dialogue written by Van Helmont and which was published separately in 1682 in English as *A cabbalistic dialogue* and that is still seen as an important Hermetic, Cabbalist text[3].

From all this we may conclude that Van Helmont, just as Knorr, can be described as a natural philosopher with a penchant for Hermetic and Cabbalist ideas. As is well known Hermetism – from Hermes Trismegistos, Thrice-Greatest Hermes, the Greek name for the Egyptian God of wisdom and script, Toth – is a religious philosophy that is said to originate in Hellenistic Egypt of the third century AD. The hermetic texts and knowledge, that were lost, were found back in the Renaissance. Centre of this philosophy is the idea that there once was an original ancient wisdom, which revealed all mysteries, the so called 'prisca theologica'. This knowledge, that would end all quarrels, including all religious disputes, and would answer all questions, is hidden behind the visible reality.

The Kabbalah is a Jewish esoteric discipline that resembles Hermetism. The Kabbalah is believed to preserve wisdom and traditions that go back to Mozes or even before and predates all world religions. An important feature of Kabbalah is that all letters, numbers and words of the Old Testament have a covered meaning. The Hebrew letters are the 'building blocks' of the universe according to the Cabbalist Naphtali ben Jacob Bacharach (Van Helmont 2007: XXIX). By deciphering these letters one should be able to find the real but obscured truth. There are special methods to reveal the wisdom that is hidden behind the visible text.

With respect to such a hidden reality behind the visible world there is a considerable overlap between Hermetism and Kabbalah. Moreover, both philosophies share many ideas with Neo-Platonism, that became very popular again in the Renaissance and immediately after. The point that these 'schools' have in common is that the universe may be considered a book that can be 'read' and of which its creator can be found by contemplating his creation.

5. ALPHABET

The Alphabet of Nature is an essay that aims at several goals, as the full title says. Three important aspects of the book can be distinguished:

- it is a method to teach the deaf to speak and understand
- it is a description of the uncorrupted, natural alphabet of Hebrew
- it is a natural philosophical treatise on the origin of human language.

These three aspects are interconnected and have a logical relation to each other.

Since Hebrew is the holy language in which the nature of the creation has been expressed, Hebrew embodies the essence of the things in the world. Accordingly Hebrew letters must have a natural or essential relation with the things they represent. Letters represent sounds. Sounds are produced by the human speech organ, especially by the movements of the tongue. So, the letters of the original uncorrupted Hebrew alphabet mirror the movements of the tongue. As an aside: Van Helmont is well aware of the other articulatory features that play a role in the production of speech sounds, but according to him the tongue movements are the most important.

Because Hebrew letters symbolize and reproduce the essential features of the consonants and vowels, somebody who wants to analyze speech sounds may do such by analyzing the letters.

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[3] See: //www.digital-brilliance.com/contributed/Karr/VanHelmont/fmvhCabDial.pdf

Camiel Hamans

People who cannot speak may be instructed how to use their speech organ and especially their tongue by showing them the drawings of the movements, which are the letters. Thus, in this way a deaf man can be taught to speak and understand, via a form of lip reading. Van Helmont, who is not only a theoretician, but also a man who experiments, claims he has taught a deaf musician to speak and understand in three weeks. Later he also picked up Hebrew.

6. CREATION

According to the fifth of the seven dialogues of Van Helmont's *Alphabet of Nature*, language has a creative power, which is the result of the process of breathing. The air one breathes in is absorbed in the whole body. In the lower abdomen the air gets mixed with semen. When speaking, air filled with semen, which has reproductive creative power, escapes through the mouth.

Therefore air without semen or with only a little bit sounds weak, as in the case of children and this is, according to Van Helmont, why children and eunuchs have problems in pronouncing [r]. Letters have a natural meaning. The meaning of [r] is that of reproduction. Young boys have not yet reproductive power, so they faint when they have to produce the corresponding sound (Van Helmont 2007, p.81).

The idea that language not only had a creative power at the moment Adam had to name the animals in Paradise (Genesis (2:19-20)), but still has, is an hermetic element in his theory. After all, human beings are provided with divine power according to hermetic theory. Hermetics consider the human being as a mortal God, just as they see the heavenly God as an immortal human being (Schilt 2013, p.139).

The creative power of language is best expressed in Genesis (2: 19-20) itself. In Van Helmont's interpretations these verses read as a process of creation.

> He did not believe the animals existed until Adam named them; before that time they were simply ideas in his mind. By imposing names on the thoughts in his mind, he brought the animals into physical existence, "because," as Van Helmont says, "to call Things by their names is to give them nature" (Van Helmont 2007, p.XVII).

Thus for example, when a horse was brought before Adam and he said *sus* (the Hebrew word for horse), he expressed the essence of "horseness" (Van Helmont 2007, p.XVII).

The quotation in this citation comes from Van Helmont's last 'publication', *Quaedam praemedidatae & consideratae Cogitationes super Quator priora Capita Libri Primi Mosis, Genesis nominate* (1697), a commentary on the first books of the Old Testament, ghost written for Van Helmont by Leibniz, which shows that the distance between more esoteric and more main stream philosophers was rather small in these days. At least smaller than this gap is nowadays. There was a daily forth and back circulation of ideas between the different schools of thought. Moreover, the term 'monad', that is so characteristic for the philosophy of Leibniz originates in the works of the hermetic natural philosopher Van Helmont and the Neo-Platonist Lady Conway (Merchant 1979, p.170).

This last book is not the only publication of Van Helmont which in fact is produced by somebody else. Van Helmont loved to discuss difficult philosophical questions with his friends and acquaintances. Some of them were so kind to write down and publish these exchanges of views under Van Helmont's name. Most of these works appeared in the form of Socratic dialogues.

The natural Hebrew alphabet according to Francis Mercury van Helmont

7. PARADISE

Van Helmont believed that Hebrew, originally, was natural and divine, but the language was corrupted in the course of the history, whereby the wisdom inherent in the language was lost or forgotten. It was his aim to reconstruct the original language and the original symbols and so to reveal the forgotten wisdom again, by which he could achieve his ultimate aim and that was to make peace. He thought he could start discovering the covered truth by analyzing the name, the form and the sound of the letters.

Van Helmont was not the only scholar who believed in a lost Paradise that could be retrieved by analyzing language. In the Low Countries, and not only there, this was a hot topic in the 16th and 17th century. Although Van Helmont travelled extensively and although much of his work was published in England, the centre of his intellectual activities were the Netherlands:

> the Netherlands were his base, in so far as he had one. (…) In his own person he epitomized the role of the Netherlands as the crossroads of North European culture in the seventeenth century (Brown 1997: 97).

When he worked during the 1670s as personal physician to Lady Anne Conway, Van Helmont was ridiculed in a satirical pamphlet published in London under the title *London's plague from Holland* (Brown 1997, p.98). So a short comparison of his work with that of a few Dutch and Flemish scholars is in place here. In this way one may see whether Van Helmont's ideas are original or do belong to the mainstream of his days.

The idea of a lost Paradise, or a lost pre-historic Golden Age, as described by Virgil in his 4th Eclogue, is common place among humanist scholars. Simon Stevin, the well known Dutch engineer, mathematician, hermetic natural philosopher and propagator of the vulgar tongue, firmly believed in it. Just as Van Helmont he thought that one could find back the lost wisdom of these days by analyzing language.

However, in his *Uytspraeck van de Weerdicheyt der Duytsche Tael* (1586) he claimed that it was not Hebrew that was the original language, but that the language in which all the wisdom could be found was Dutch. Therefore this language is the most suitable for expressing the true knowledge. Because of its ease of word formation Dutch is the best language to express newly found conceptions in. Stevin's work was very influential and that is why in modern Dutch the words for 'mathematics', 'geometry' etc. still differ from international standards. In modern Dutch self explanatory terms such as 'wiskunde' en 'meetkunde' are still in use. (Van Hal 2010, p.133 & Schilt 2013, p.135-138).

In this respect Stevin followed Goropius Becanus, a physician and polyhistor, who studied the history of Antwerp and 'proved' that Dutch was the language of Paradise in his *Origines Antwerpianae* (1569). This idea that the own language is the original and best language is not typically Dutch. Not only almost all major Western languages have been considered to be the first language, but also other national tongues. So, Laurentius Petri Gothus (1559) claimed that Swedish must be the original language, Stanislaus Hosius (1584) was convinced that the first language was a Slavic tongue and the militant Polish Jesuit Piotr Skarga (1577) defended the idea that Polish is the language of creation (Swiggers 1984, p.17 & 27.n5).

8. SCYTHIAN

In the Low Countries there were more authors who defended a special place for their own native language, but most of them did not claim that their native tongue, Dutch, was the oldest

Camiel Hamans

and original language. According to scholars such as Mylius (16__,, __hrieckius (1614) , the famous specialist on international justice Hugo Grotius (1617, 1642, 1644 & 1655), Elichman (1636 & 1640), Saumaise (1643) and especially Boxhorn (1647 & 1650) Dutch belonged to a very old group of languages, called Scythian by some of them, which had a similar status and age as Hebrew, but did not originate in Hebrew (Droixhe 2002, p.150-161 & Van Hal 2010: , p.209-399). Hebrew, as the language of the Old Testament, had a certain extra status, but it was not necessary the mother of all the other languages nor was there a necessary natural relation between this language and the real world. Quite a few of these scholars defended a conventional relation between language and the world it describes.

On the other hand Schrieckius added a treatise on the Hebrew alphabet to his text when he published his 1614 Dutch book in Latin in 1615. He made a comparison between the Hebrew alphabet and the 'Celtic' letters that corresponded with the Hebrew symbols. Since according to Schrieckius languages such as Hebrew and Scytho-Celtic have a natural relation with the things in the world, there should be a relation between the two set of letters as well. The elements in the real world are the same; so the form of the letters that symbolize the things in the world should also show a correspondence. In Schrieckius' opinion the 'Celts' descend from the Scythes and live all over Europe. Their language, which replaced Hebrew after Babel, he calls Scythian, Scytho-Celtic but also Belgica or Teutonica. (Swiggers 1984, p.19 & 28 n.2).

Grotius (1642 & 1644), who in the tradition of Stevin highly praised his mother tongue, still saw Hebrew as the oldest language following the tradition established by the Church fathers Jerome and Augustine. He tried to prove that the American Indians descended from Germanic colonizers. Therefore their language had to show traces from the first human language, Hebrew. The Dutch geographer Johannes de Laet (1643 & 1644) criticized Grotius seriously and showed that the languages of the native American Indians have no relation whatsoever with languages such as Hebrew, Latin, Greek or the modern languages of Europe. (Van Hal 2010; p.299-333).

In reaction to the unpleasant discussion between Grotius and De Laet the French theologian Isaac La Peyrère, who happened to know Grotius and Saumaise personally, published his sensational book *Praeadamitae* (1655), which appeared in Amsterdam. In this study La Peyrère argues that there must have lived people before Adam.

9. TRADITION

Of all these discussions one does not find any trace in Van Helmont's treatise. He stays in line with the traditions that claim that that there once was a Golden Age, that Hebrew is the original language and that there is a natural relation between names – words and other linguistic elements – and the real world, just as one of the opponents in Plato's *Cratylus* states.

Van Helmont was not the only one who believed that Hebrew was of a special nature. Francis Lodwick, a Flemish merchant living in London and an active member of the Royal Society, also showed interest in the sounds of Hebrew letters (Lodwick 2011, p.119). Lodwick, an active language planner and involved in all kinds of universal language schemes – in 1647 he designed a real character, a kind of a universal alphabet, and in 1652 he developed a philosophical universal language scheme on a numerical basis (Hamans 1975, Lodwick 2011 & Smith 2011) – used invented, abstract symbols for the radices of his universal alphabet, but showed real interest in the sound of Hebrew and Arabic, because it could help him in finding the best letters for his universal alphabet. His colleague language planners George Dalgarno and Bishop Wilkins – their essays appeared in 1661 and 1668 respectively – considered

The natural Hebrew alphabet according to Francis Mercury van Helmont

Hebrew the best fit for a universal character because of the supposed fewest figure of radical words (Lodwick 2011, p.21).

10. PHONETICIAN

In another respect Van Helmont fits into the tradition as well. This is the stress he puts on the education of the deaf with respect to language. Language philosophers from Descartes till Kant, especially Diderot and Condillac, also used the deaf and mute to discuss the nature of language (Ricken 1994 & Ehrsam 2012). Although Van Helmont suggests that he is more interested in teaching the deaf how to speak and understand, actually the deaf musician of Sulzbach, who managed to learn language via Van Helmont's method is more an instrument to prove Van Helmont's ideas about the nature of the language than a patient who may be cured. The other philosophers take a similar position.

Joh. Conrad Amman, the founding father of the real education of the deaf, showed a more practical interest in his *Surdus Loquens* (1692), the essay that was published together with Van Helmont's *Alphabet of Nature* in a Dutch translation in 1697. Amman realised that the same letter may be pronounced differently in various dialects. This brought him to the idea that one should abstract from the actual realization and should concentrate on an 'ideal' pronunciation, in a way a precursor of the later concept of the phoneme. Amman also concluded that the number of simple sounds and movements is very restricted. In all the languages he had seen the maximum turned out to be 24. Moreover, in most languages only a very few of the 24 letters/sounds fail, but the way the 'ideal' letters sound in the various languages may differ considerably. In some languages the sounds are produced a bit more closed, or sound somewhat more harsh or louder (Jongeneelen 1994, p.8-9). Amman's 'ideal' letters can be symbolized by Van Helmont's alphabet of nature. So it is not a coincidence that the two essays are published together. The teacher of the deaf may restrict himself to the teaching of Van Helmont's alphabet of nature (Jongeneelen 1994, p.8).

Moreover, Van Helmont himself can be seen as a phonetician (Klijnsmit 1996). The way he observes the articulatory movements of the speech organ to describe the nature of the Hebrew letters is doing phonetics in a way. In this respect Van Helmont fits very well in the tradition of the Hebrew grammarians. Whereas early grammarians of other languages usually concentrate on morphology and some syntax as was common in the Latin tradition, the Hebrew linguistic tradition deals mainly with articulatory phonetics. The influence of the Hebrew grammatical tradition on the existing Latin tradition led to a considerable innovation, as Kessler-Mesguich (1996, p.88) shows.

Although Van Helmont's ideas fit into most of the contemporary traditions and although he is seen by a fine scholar and good physician as Amman as somebody who has enriched the world with his ideas, not everybody took him seriously. The Hebraist Joh. Jacobi Schudt called Van Helmont's ideas ridiculous 'ridicula'' and made a fool of him (Schudt 1700, p.62).

11. GIMEL

To show what the real quality of Van Helmont's linguistic work is an example may be helpful. In the sixth dialogue between the two antagonists H. and M., Van Helmont explains the nature of the sounds, the form of the letters and their correspondence. Here the Hebrew letter 'gimel' is taken as an example (Van Helmont 2007, p.111-113).

Figure 1, which is a cross section of the human speech organ, shows the movements of the tongue. The headband, that contains four positions, shows symbols from alternative alphabets (position 2 till 4). In position 1 the corresponding possible soft consonant is given. The bar under the head reads, as in good Hebrew, from right to left, and starts with the letter, followed

Camiel Hamans

by the constituent letters of the name of the letter, 'gimel' in this case. As in traditional Hebrew only the consonants are represented by letters. The vowels are represented by vowel points, the so called 'niqqut'.

The alphabet has a natural order, according to Van Helmont. So it is not an accident that 'gimel' follows on 'beth':

> H. How can the connection of *Beth* with the following letter be determined from the nature of the letter itself?
>
> M. The end of the action in pronouncing this letter ['beth' is meant here, CH] consists in the rising of the tongue, which needs to go forward only a little in order to begin the letter *Gimel,* as anyone can easily ascertain. [M. does not mean the sound /b/ but the whole name *Beth*, that ends in a /t/. That is why the speaker has to raise his tongue in order to produce a /t/.]
>
> H. What is the power of the letter *Gimel*, and how can this shape be deduced from the motion of the tongue ?
>
> M. The letter G is one of the silent palatals, even though it is slightly aspirated like a partial laugh.
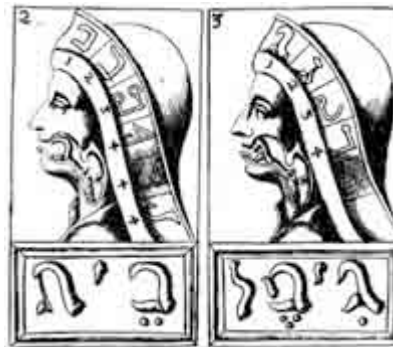

Figure 1, the diagrams of Beth(left) and Gimel (right)

Here, the tongue presses firmly against the upper palate, especially the strong part behind the tip, in such a way that the upper part of the tongue is hollowed out like a channel and struck by the exhalation of air with a whistling sound. Moreover, because pressure is chiefly applied by the part of the tongue behind the tip, the tip hangs down somewhat lower and curves forward a bit. Immediately afterwards strong pressure is applied to the back of the tongue with the midsection stretching forward so that the root of the tongue lifts up a little at the same time. Finally, when this action has been completed in the highest part of the mouth, the tongue must descend to the lowest part (…), from where the tip of the tong quickly ascends to a certain height. One should also note that as the tongue rebounds from the palate, the breath, having struck the upper teeth, bounces back under the tongue. Therefore, this letter becomes a bit harsh. If, however, the initial action of the tongue is not so violent that the tip curves forward, it does not rebound again in its descent, as is shown in position number 1 on the headband. This letter is softer and is called the softer *Gimel*.

> H. Why did the ancients name this letter *Gimel* [ג], and how does the name indicate its connection with the following letter?
>
> M. They seem to haven taken into account the following:
>
> 1). The curved tip of the tongue, hanging downwards exhibits the figure of the letter *Jod* [י], and the breath exists from this figure just as nature requires in forming the vowel *Chirek* [one vowel point].

2). Because with the falling down of the tongue, our mouth is shaped in the way necessary to pronounce the letter M, and because, moreover, the tongue descends all the way to the bottom, it appears to signify the vowel *Saegol* [three vowel points], which cannot be pronounced unless the mouth is opened to its lowest part.

3). The letter *Lamed* [ל] is hidden in the shape of *Gimel* [ג] when the mid part of the tongue protrudes and the back part is curved. And this letter puts the tongue in position from to begin the action for the following letter. The tongue reaches this position when it begins to ascend from below at the end of the letter. Thus, the connection of these letters is obvious.

The name *Gimel* signifies either a "camel" or, according to others, "retribution". As for the common explanation for this name, other authors can be consulted."(Van Helmont 2007, p.111-113)

12. CONCLUSION

From what has been said so far it is clear that the esoteric ideas of Van Helmont are not of great importance to modern linguistics. His theory that the letters of the Hebrew alphabet have a hidden significance, a natural meaning should obviously be rejected, just as his idea that Hebrew or any language has a natural relation to the objects it signifies. Moreover, Van Helmont's ideas concerning the education of the deaf have become outdated in this era, in which sign languages prevail.

However, Van Helmont turns to be more than a curious figure from the past. His philosophical ideas about language do not resonate anymore, although they offer us a good image of the ideas popular in his time, but his precise phonetic observations are still worth studying. Together the dungeons of the inquisition, a mirror, the genius and the perseverance of Van Helmont (figure 2) offered us a fine piece of early phonetic observation.

Camiel Hamans

Figure 2, Frontispiece to Van Helmonts *Alphabeti vere Naturalis Hebraici* (1667)

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possunt, ut non alios saltim loquentes intelligere, sed et ipsi ad sermonis usum perveniant, Sulzbach, Abraham Lichtenthaler.

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