

# Pierre Lyonet's (1706–1789) Study of Insects: Displaying Virtue and Gaining Social Status through Natural History

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## ABSTRACT

This paper looks at the gentlemanly natural history practised by Pierre Lyonet (1706–1789). Eighteenth-century natural history was inextricably linked to social status and Enlightenment ideals such as civility. By looking at the social network built by Lyonet, we can reconstruct how spare-time naturalists could enter the Republic of Letters, learned societies, and what this meant in the wider culture. For Lyonet, his study of insects had profound moral, religious and patriotic dimensions. This political and societal embeddedness enabled Lyonet to be a benefactor to the state's 'public good', meet the standards of a gentleman, while at the same time adhering to politesse in the Republic of Letters. All in all, this paper presents Lyonet as a gentlemanly naturalist working for state and status.

*Keywords:* Pierre Lyonet; natural history; Republic of Letters

Pierre Lyonet's name is scarcely known today. He was a statesman and naturalist in the midst of the eighteenth century. Lyonet held various government positions at the Staten Generaal (States General), such as translator, master of patents, and cryptographer. As a naturalist, Lyonet worked as a draftsman alongside the prominent naturalist Abraham Trembley (1710–1784) on their study of the sweet-water hydra in the 1740s.<sup>1</sup> Afterwards, Lyonet wrote and published his extensive commentary on a French translation of Johan F. Lesser's *Insecto-theologia* to later publish his own anatomical study of a caterpillar in the 1760s.<sup>2</sup> All these natural historical pursuits, however, were done in Lyonet's spare time, alongside his governmental for the Staten Generaal in The Hague.

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1 A. Trembley, *Mémoires, pour servir à l'histoire d'un genre de polypes d'eau douce, à bras en forme des cornes* (Leiden 1744).

2 J.F. Lesser, *Theologie des Insectes, ou demonstration des perfections de Dieu, dans tout ce qui concerne les Insectes*, commentary by P. Lyonet, 2 vols. (La Haye 1742).

Let me briefly introduce Lyonet's and his biography.<sup>3</sup> Pierre Lyonet was born in Maastricht in the Dutch Republic on July 21, 1706, as a son of the Huguenot preacher Benjamin Lyonet and Marie Le Boucher. Benjamin was a well-known preacher in Maastricht and had similar aspirations for his son: to study theology. Pierre Lyonet started studying theology at Leiden University in 1724, but eventually switched to law. In 1731, he defended his thesis on rejecting the use of torture in law (the use of a rock or *pijnbank*).<sup>4</sup> After receiving his doctorate, Lyonet settled down in The Hague, and took the oath to become a lawyer for the Court of Justice of Holland.<sup>5</sup> Five years later, in 1736, Lyonet was admitted as a lawyer to the Supreme Court (Hoge Raad).<sup>6</sup> In short, Lyonet's ascension through the governmental ranks was apparently going swiftly and smoothly: from 1736 onwards he obtained governmental functions for the States General (Staten Generaal) – the highest representational governmental body – as a translator, cryptographer, and later a master of patents.

Alongside his governmental career, Lyonet was a fervent draftsman and observer of insects from the 1730s onwards. The interplay between his governmental position and work on the one side, and his activities in natural history on the other, will be the main focus of this paper. Lyonet's self-portrait emphasize both his skills as an observer and a artist (see fig. 1). Here, the wide-eyed and attentive Lyonet looks out at the viewer, armed with an engravers' pen, as if ready to capture what he has carefully observed. Lyonet's study of insects, however, was not a solitary and isolated practice, but was embedded in social networks, systems of credibility, and social status.

This paper focuses on these social dimensions of Lyonet's natural history. The first part looks at how Lyonet entered the transnational circle of naturalists – or the province of natural history in the Republic of Letters if you will – and learned societies, by analyzing correspondence, letters of recommendation, and membership diplomas of a variety of learned societies. The second part concentrates on the practice of natural history by Lyonet, asking how observing, dissecting, and drawing insects fitted in an eighteenth-century ideal of gentlemanly knowledge production. All in all, this paper will show how both the networking strategy and cultural ideals of knowledge expressed in Lyonet's practice of natural history were essentially ways to serve the state (or the 'public good'), worship God by studying his creation, and acquire social status as a virtuous gentleman.

### *The Gentleman Scholar between Sciences and Politics*

So where does Pierre Lyonet fit in the eighteenth-century world of arts and sciences? While at first Lyonet appears to be another gentlemanly scholar of the eighteenth century – one who possesses a microscope to observe insects, collected shells, *naturalia*, and other curiosities, and could therefore impress his friends – a closer look at his letters and ascension in the Republic of Letters quickly reveals a serious naturalist who was eager to be successful both as a statesman and a naturalist.

3 For a comprehensive biography of Pierre Lyonet, see W.H. van Seters, *Pierre Lyonet, 1706–1789: Sa vie, ses collections de coquillages, et de tableaux ses recherches entomologiques* (The Hague 1962). For Lyonet as a cryptographer, see K.M.N. de Leeuw, *Cryptology and statecraft in the Dutch Republic* (Amsterdam 2000) 24–30.

4 P. Lyonet, *Dissertatio juridica inauguralis de justo questionis usu* (Leiden 1731).

5 Admission Court of Justice of Holland (Hof van Holland), 1731, Leiden, Boerhaave Museum Library (hereafter BML): Arch 162f.

6 Admission Supreme Court (Hoge Raad), 1736, BML: Arch 162h.



Fig. 1: Self-portrait. Drawn by Pierre Lyonet, 1758. Rijksmuseum: RP-T-00-1759, <http://hdl.handle.net/10934/RM0001.COLLECT.231018>.

These two roles went hand in hand. In the early modern period, the networks and patronage structures of both politics and the sciences overlapped to a large degree. If one wanted to have a career in politics or the sciences, one needed to have strong connections with prominent men. These connections, and their visibility in letters and dedications, offer a way to understand early modern power relations, as well as a way to understand how certain individuals managed to become established in the Republic of Letters, while others perished.

Historians have analysed the development of scholarly networks and the standing of scholars in the Republic of Letters. As Bianca Chen has shown, Gisbert Cuper (1644–1716), a scholar and diplomat, could employ his social capital gained in the political realm for the benefit of his reputation in the Republic of Letters.<sup>7</sup> Despite the fact that Cuper had a limited scholarly output, he was able to rise in the ranks of the Republic of Letters as well as in politics since he had a central position in the overlapping networks. Elsewhere, Chen has argued that Cuper's agency as an agent for scholars and diplomats 'were performed separately with different people and by separate letters, but within the same sphere of power relations in the Dutch Republic.'<sup>8</sup> This same, or merged, sphere of power relations which can make or break a career in either politics or the Republic of Letters is typical of the late seventeenth and eighteenth century.

Disputes in the Republic of Letters could be solved referring to social status. In this vein, Pierre Lyonet was also involved with a dispute about the credibility of Pieter Gabry (1715–1770), a Dutch gentleman scholar. As Huib Zuidervaart has shown, Gabry deliberately tried to gain social status and acceptance through the pursuit of science, which eventually led him to fabricate results and plagiarize. Pierre Lyonet initiated Gabry's downfall by discrediting some of his observations, and Gabry was eventually banished from the Republic of

7 B. Chen, 'Digging for Antiquities with Diplomats: Gisbert Cuper (1644–1716) and his Social Capital', *Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts* 1 (2009).

8 B. Chen, 'Politics and Letters: Gisbert Cuper as a Servant of Two Republics', in M. Keblusek and B.V. Noldus (eds.), *Double Agents: Cultural and Political Brokerage in Early Modern Europe*, Studies in Medieval and Reformation Traditions 154 (Leiden 2011) 71–94.

Letters, and dubbed a ‘plague to the learned world.’<sup>9</sup> Lyonet could draw on his social stature. Incidents like these emphasize the importance of social status and civility, but also the fragility of one’s position.<sup>10</sup> But how did Lyonet gain social status as a credible gentleman? For this, we have to look at Lyonet’s entrance into the Republic of Letters and learned societies.

### *Entering the Republic of Letters*

Historians who have studied epistolary exchanges and the sense of community between scholars in the early modern period emphasize the importance of codes, rules, and honour. Entering the imagined community between learned men often dubbed the Republic of Letters required merit, and, as it turns out, a network of friends and colleagues who are already established in the epistolary network.<sup>11</sup> In order to consolidate oneself in the learned world, one needed to follow the codes and make sure to slowly gain access to the most prominent members of the Republic of Letters.<sup>12</sup> Or, as Saskia Stegeman has aptly put it: ‘With local connections already in place, it was possible – after careful preparation – gradually to enlarge existing circles. Through known connections already in contact with one or more influential persons, a young scholar could pay his respects to them and eventually become a familiar name to them.’<sup>13</sup> To understand how Lyonet became an established naturalist, we have to trace how he forged relations with the illustrious René Antoine Ferchault de Réaumur in Paris.

In the 1740s, Réaumur was well-known for erudition and voluminous *Mémoires* on the natural history of insects.<sup>14</sup> He received credibility and recognition beyond the borders of France, signified in 1739 by the election as a member of the Royal Society in London, since ‘His Name hath been known for many years among the Learned’ and because of his multiple and excellent ‘Literary Titles.’<sup>15</sup> At this time the study of insects in western continental Europe (France, Dutch Republic, Switzerland) was organized around Réaumur, who acted as an authority, collaborator, editor and a center of correspondence. Moreover, Réaumur’s *Mémoires* inspired the study of insects throughout Europe by many young naturalists such as Charles Bonnet, Abraham Trembley, Charles de Geer, Gilles Bazin, and also Pierre Lyonet.<sup>16</sup> All of them corresponded with Réaumur, sending observations and specimens to Paris. Yet, to understand how Lyonet could eventually correspond with Réaumur, we have to look at the naturalist who introduced Lyonet to Réaumur: Abraham Trembley.

9 H.J. Zuidervart, ‘“A Plague to the Learned World”: Pieter Gabry, FRS (1715–1770) and His Use of Natural Philosophy to Gain Prestige and Social Status,’ *History of Science* 45 (2007) 287–326.

10 S. Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago and London 1994).

11 For an introduction to the Republic of Letters, see H. Bots and F. Waquet, *La République des Lettres* (Paris, 1997); A. Goldgar, *Impolite Learning: Conduct and community in the Republic of Letters, 1680–1750* (New Haven, CT 1995); D. van Miert, ‘What was the Republic of Letters: A brief introduction to a long history (1417–2008),’ *Groniek* 204/205 (2010) 269–287.

12 S. Stegeman, *Patronage and services in the Republic of Letters: The network of Theodorus Janssonius van Almeloveen (1657–1712)* (Amsterdam 2005) 355–444; idem, ‘How to set up a scholarly correspondence: Theodorus Janssonius van Almeloveen (1657–1712) aspires to membership of the republic of letters,’ *Lias: Journal of Early Modern Intellectual Culture and its Sources* 20 (1993) 227–243.

13 Ibidem 233.

14 [René Antoine Ferchault de] Réaumur, *Mémoires pour servir à l’histoire des insectes*, 6 vols. (Paris 1734–1742).

15 Membership proposal letter of Réaumur, 1739, London, Royal Society Archive (hereafter RSA): EC/1739/07.

16 For an overview of Réaumur’s practice of natural history, see M. Terrall, *Catching Nature in the Act: Réaumur and the Practice of Natural History in the Eighteenth Century* (Chicago 2014).



Fig. 2: Portrait of Willem Bentinck (1704–1774), Lord of Rhoon and Pendrecht. Painted by Jean-Etienne Liotard, 1755–1756. Rijksmuseum: SK-A-4155, <http://hdl.handle.net/10934/RM0001.COLLECT.10131>.

Trembley came into contact with Réaumur through his cousin and close friend, Charles Bonnet (1720–1793), a Genevan philosopher and naturalist. Bonnet read and highly appreciated Réaumur's *Mémoires*, as he writes in his autobiography, 'I found in the *Mémoires* of Mr. de Réaumur all that could satisfy my ardent curiosity, feed my taste, enlighten my Spirit and guide it in its path.'<sup>17</sup> As a response to Réaumur's call to send in observations, Bonnet reported his close observation of aphids, concluding that they reproduced asexually, an observation which contradicted metaphysical beliefs of nature at the time.<sup>18</sup> As a mark of his excellence, the nineteen year old Bonnet was appointed as an official correspondent of the Académie des Sciences in 1740. Such a title, linked to the well-known Réaumur and a prestigious society, made sure Bonnet enjoyed credibility as a naturalistic observer through Europe. Memberships of other learned societies, such as the Royal Society in London, soon followed.<sup>19</sup>

Abraham Trembley was one of Bonnet's correspondents, since they knew each other from the intellectual circle in Geneva. After Trembley left Geneva, he resided at Sorgvliet, the estate of the noble Bentinck family in The Hague (now called Catshuis) between 1739 and 1747. Here he served as the personal tutor of the Bentinck children. The Bentinck family was an influential noble family in the Dutch Republic. Willem Bentinck (1704–1774), Lord of Rhoon and Pendrecht, proudly posing in a 1750s painting (see fig. 2), was Trembley's patron and maintained strong bonds with Stadtholder Willem IV.<sup>20</sup> In his many leisure hours, Trembley engaged in the study of nature, focusing on insects and polyps (sweet-water hydra). Through his family connections with Bonnet and their shared interest in natural history, Trembley came into contact with Réaumur. In 1740, during his study of

17 C. Bonnet and R. Savioz (ed.), *Mémoires autobiographiques* (Paris, 1948) 51.

18 For a more detailed account of Bonnet's work and the issue of (spontaneous) generation, see V.P. Dawson, *Nature's Enigma: The problem of the Polyp in the letters of Bonnet, Trembley and Réaumur* (Philadelphia 1987) esp. 167–176.

19 Membership proposal letter of C. Bonnet, 1743, RSA: EC/1743/08.

20 See e.g. Bentinck's role in the Orangist revolution in 1747, J.I. Israel, *The Dutch Republic: Its Rise, Greatness, and Fall, 1477–1806* (Oxford 1998) 1067–1078.

nature in the ponds at Sorgvliet, Trembley found something ‘le plus remarquable’: an aquatic ‘petit être’ (later called polyp or *hydra*) that, after having been cut in two separate pieces, continued to grow as two separate beings. Trembley did not draw any conclusions, but did realize it was an important phenomenon, since it was in conflict with the prevailing view that an animal is complete and whole, and should not continue to live after division.<sup>21</sup>

Trembley now had a reason to contact the illustrious Réaumur. Since the two were unacquainted, Trembley had to make sure to come across as a humble gentleman. In his lengthy second letter to Réaumur, Trembley apologized for his boldness in writing such long letters, since it violated the custom of modesty in the Republic of Letters:

I notice the extreme length of my letter. Pardon me, mister, for my indiscretion. I contradict myself. I wish to show you my gratitude, and I expose you to the tedious reading of the investigations of a schoolboy, having tasted in your works so many agreements, and which for me is always a source of gentle and tranquil pleasure, and in which I find so much knowledge that would be impossible to find elsewhere. I impose [on myself] silence for the future; I promise you. Sir, to break it only in case I find some animal or something that appears to be worthy of being communicated to you.<sup>22</sup>

Clearly, Trembley took on a subordinate role vis-à-vis Réaumur. Trembley not only regaled Réaumur with numerous compliments, but he also played himself down as a ‘schoolboy’. This letter illustrates the caution with which Trembley forged his correspondence network. Trembley’s success relied not so much on the successful discovery of the regeneration of the polyp, but rather on the social techniques Trembley employed to share and communicate his findings.<sup>23</sup> Adhering to ideals of civility and utility in the Republic of Letters was key here. The caution was even more clear when Trembley introduced Lyonnet to Réaumur over the course of two letters in 1740. In one of his first letters to Réaumur, he mentioned an anonymous ‘ami’ and fellow observer:

I have a friend [*ami*] here [in The Hague at Sorgvliet], who has also observed one [caterpillar], and has seen its birth, while he has kept it in perfect solitude since its birth.<sup>24</sup>

The anonymous *ami* shared an interest in nature, and they were working together at Bentinck’s Sorgvliet, where Trembley resided. Trembley quickly introduced and praised his *ami* to Réaumur a few months later at the end of a letter:

P.S. There is a Mr. Lionnet [*sic*] here strongly devoted to the study of insects, who saw a worm of nine thumbs long issuing from a grand caterpillar he was feeding [...] He lived two days before

21 Dawson, *Nature’s Enigma* (n. 18) 96–105.

22 ‘Je m’aperçois de l’extrême longueur de ma lettre. Pardonnez-moi, Monsieur, mon indiscretion. Je me contredis moi-même. Je veux vous témoigner ma reconnaissance, et je vous expose à l’ennuyeuse lecture des recherches d’un écolier, après avoir goûté dans celles de vos ouvrages tant d’agrémens, et qui continuellement encore est pour moi une source de plaisirs doux et tranquilles, et dans lesquels je trouve tant de connaissances qu’il seriat impossible de trouver ailleurs. Je me impose silence pour l’avenir et je vous promets. Monsieur, de ne le rompre qu’au cas que je trouve quelque animal ou quelque fait qui paraisse tout à fait digne de vous être communiqué.’ Trembley to Réaumur, December 15, 1740, in É. Guyénot (ed.), *Correspondence inédite entre Réaumur et Abraham Trembley comprenant 113 lettres* (Geneva 1943) 115.

23 M.J. Ratcliff, ‘Abraham Trembley’s Strategy of Generosity and the Scope of Celebrity in the Mid-Eighteenth Century’, *Isis* 95 (2004) 555–575.

24 ‘J’ai un ami ici [dans La Haye] qui en a aussi observé un [Chenille], et qu’il a vu accoucher, quoiqu’il l’ait tenu dans un parfait solitude depuis sa naissance.’ Trembley to Réaumur, September 26, 1740, in Guyénot (ed.), *Correspondence* (n. 22) 6.

passing away. He crawled and wiggled. I saw him dry; it looked like violin string. Mr. Lionnet [*sic*] draws perfectly. He represented all its entanglements.<sup>25</sup>

These letters show how Trembley meticulously introduces Lyonet to Réaumur as a draftsman: first as an anonymous *ami*, then in a post-scriptum. Lyonet had been interested in natural history for a few years, and found a way to express and communicate his knowledge and skills to a wider Republic of Letters through his connection with Trembley. To recount, Trembley was connected with Réaumur through his family connection with Bonnet. Through this local connection with Trembley, Lyonet could gain access to the wider circle of naturalists, a typical strategy for setting up a correspondence.<sup>26</sup> By first working with Trembley, then having Trembley introduce him carefully, Lyonet entered the naturalistic epistolary circle around Réaumur. Thereafter, Lyonet maintained a direct correspondence consisting of thirtysome letters with Réaumur throughout the 1740s.<sup>27</sup> Here we can see that gaining access to epistolary contact with influential naturalists relied on known connections who could then gradually introduce Lyonet as an observer with skill and merit.

### *Learned Societies*

Towards the end of the seventeenth century learned academies and societies started to emerge, most notably the Royal Society in London and Académie des Sciences in Paris.<sup>28</sup> These institutions were central to obtaining, maintaining and centralizing credibility in matters of the natural sciences and granting social status to its members. The membership of a 'gentleman' in English, or 'savant' in French, was crucial since it enabled the stable production of knowledge – the academy imposed a certain methodology and etiquette upon its members, but granted members access to, and credibility in, the Republic of Letters.<sup>29</sup> This was of great interest for naturalists such as Lyonet, since membership helped to distinguish them from a mere *liefhieber* (amateur). Here, we look at Lyonet's attempts to gain membership of the Royal Society in London and the then newly-founded Hollandsche Maatschappij der Wetenschappen (Holland Society of Sciences). The former was already highly regarded in the learned world, and the latter emerged in the 1740s in the Dutch Republic, built on the belief that knowledge and the sciences could help mankind and the state prosper.<sup>30</sup>

Lyonet's entrance into the Republic of Letters was highly dependent on already forged connections with influential men – not necessarily naturalists. First, in 1743, Trembley asked

25 'P.S. Il y a ici un Monsieur Lionnet [*sic*] fort attaché à l'étude des insectes, qui a vu sortir d'une chenille assez grande qu'il nourrissait un ver de neuf pouces de long [...] Il a vécu deux jours après être sorti. Il rampait et se tortillait. Je l'ai vu sec; il semble une corde de violon. Monsieur Lionnet [*sic*] dessine parfaitement. Il a représenté tous ses entortillemens.' Trembley to Réaumur, December 15, 1740, *ibidem* 15.

26 Stegeman, 'How to set up' (n. 12).

27 For an overview of the correspondence and an interpretation, see E. Hublard, *Le naturaliste hollandais Pierre Lyonet: sa vie et ses oeuvres (1706–1789) d'après des lettres inédites* (Bruxelles 1910); there is also an overview of Lyonet's letters in Van Seters, *Pierre Lyonet* (n. 3) 185–188.

28 For an overview of scientific societies, see J. McClellan III, *Science Reorganized: Scientific Societies in the Eighteenth Century* (New York 1985).

29 M. Biagioli, 'Etiquette, Interdependence, and Sociability in Seventeenth-Century Science', *Critical Inquiry* 22.2 (1996): 193–238.

30 B. de Haan, *De Hollandsche Maatschappij der Wetenschappen, 1752–1952* (Haarlem 1952); W.W. Mijnhardt, *Tot Heil van 't Menschdom* (Amsterdam 1988) 86–90.

for membership of the Royal Society, with recommendations of Réaumur and his patron William Bentinck:

Mr. Trembley [...] already known to the Royal Society by his Late curious Observations in Natural History communicated to them; being very desirous of the Honour of becoming a fellow of the Same we whose Names are under written do at his request propose him Accordingly: And as well on the credit of his general reputation, as of the very advantageous character given of his Candor, Learning, and Merit, by the Hon.<sup>ble</sup> William Bentinck Esqr. and Mons.<sup>r</sup> Reaumur, fellows of the Society in Holland and France. [...]<sup>31</sup>

Here, Trembley was praised by both a noble gentleman, Bentinck, and a well-known naturalist, Réaumur. Trembley gained acceptance, and at the end of the same year he was awarded the yearly prize for outstanding achievements.<sup>32</sup> At this point, Trembley was considered an important natural experimenter throughout Europe, marked by his prestigious membership and prize. This did not only give him a position of authority, but also the ability to propose other naturalists as members of the Royal Society. Between 1745 and 1750, Trembley vouched for eleven gentlemen who were in 'every way well qualified and likely to be a usefull member of our body.'<sup>33</sup> Clearly, membership did not only entail attaining intellectual status, but also a central and powerful position in the Republic of Letters, since it allowed Trembley to propose new members, among others Pierre Lyonet. Trembley praises Lyonet in his proposal letter as

A Gentleman well Skilled in Philosophical and Natural knowledge; a dilligent Observer and promoter of usefull Experiments. and enquiries, being desirous of the Honr. of becoming a Member of this Royal Society: we do both on our own knowledge and upon the recommendation of Monsr. de Reaumur of Paris hereby propose and recommend him as a Gentn. of true merit and every way qualified to be a usefull member of our body.<sup>34</sup>

Again, we see a reference to Réaumur and a reference to Lyonet's virtuous behaviour: useful, well-skilled, and diligent. Lyonet was accepted as a fellow of the Royal Society in London in 1748.

In the same vein, the correspondence between Lyonet and Christianus Carolus Henricus van der Aa, the secretary of the *Hollandsche Maatschappij der Wetenschappen* from 1752 until 1793, allows us to see how the society amassed new members in their first years of existence. The society held regular meetings in Haarlem with its local members and maintained correspondences with its 'honorary', or rather external, members.<sup>35</sup> Lyonet was one of the first members of the society, along with other Dutch members of the Royal Society in London, such as Leiden university professors Pieter van Musschenbroek and Johannes Nicholas Sebastianus Allamand. This suggests that the directors and members of the *Hollandsche Maatschappij* deemed any member of the Royal Society worthy to be

31 Proposal letter Abraham Trembley, May 19, 1743, RSA: EC/1743/03.

32 Minutes of a meeting of the Council of the Royal Society, November 30, 1743, RSA: CMO/3/108.

33 This sentence appears in almost every proposal letter Trembley has written, e.g., Proposal letter J.N.S. Allamand, January 22, 1747, RSA: EC/1746/14.

34 Proposal letter Pierre Lyonet, July 2, 1747, RSA: EC/1747/13.

35 De Haan, *Hollandsche Maatschappij* (n. 30) 8–9.

a member of their society. On October 15, 1753, it was decided that the proposal to make Lyonet a member by Thomas Schwencke – the private doctor to the Bentinck family – was granted. Lyonet was accepted on the condition of having the ‘benignity to cooperate.’<sup>36</sup>

Lyonet signed most letters to Van der Aa with ‘Uw Dienstwillige Dienaar’ (Your Accommodating Servant), emphasizing his role as a servant to the goals of the Society, i.e. the progress of the sciences and society. At the same time, he was also truly concerned about the prestige of the society. After receiving his membership diploma in 1762, Lyonet responds to the enclosed rules of the society.

I also find in the article that the Members should aspire to increase the number of Members. One could object, with reverent improvement in mind, that it would be more appropriate to fix the amount of Members [...] The prestige of a society diminishes because of a high number of Members and easy appointment of new Members [...]<sup>37</sup>

To remain polite and not come across too boldly, Lyonet concludes his letter politely: ‘However, I leave this to the wiser judgment of the Gentlemen Directors, who I deem highly regarded with all my honour.’<sup>38</sup> Although Lyonet did take the liberty to express his criticism, he made sure to add niceties to restore his position as a servant to the society.

Lyonet’s membership of the society involved the exchange of correspondence, advice, credibility and books.<sup>39</sup> He acted as a gentlemanly scholar, giving advice, sending his books, and resolving issues about credibility, such as the controversy surrounding the physicist and astronomer Pieter Gabry in 1754. Since Lyonet had recommended Gabry to the Royal Society and the Hollandsche Maatschappij, he felt the responsibility to tell the secretary Van der Aa not to publish Gabry’s account of a parhelion. Lyonet was sure Gabry could not have observed this, and Lyonet’s testimony was decisive in Gabry’s unmasking as a fraud and the ‘plague to the learned world.’<sup>40</sup>

The correspondence between Lyonet and Van der Aa shows how his affiliation with the Hollandsche Maatschappij consisted of a carefully weighed balance between give and take. Lyonet offered advice, evaluation of other learned men and their works, and sent his works to the society. In turn, Van der Aa acquired books for Lyonet through his correspondence network, published his articles, and granted Lyonet social and intellectual prestige as a member.<sup>41</sup> Overall, Lyonet was a formidable *Dienstwillige Dienaar* of the many societies he was a member of. By 1762, Lyonet was member of the learned societies in London, Haarlem, Rouen, Berlin, Halle and Saint-Peterburg.<sup>42</sup> Now we turn to how Lyonet’s membership of the Republic of Letters and learned societies related to gentlemanly ideals of knowledge and virtue.

36 Minutes October 15, 1753, in *Minute book (1752–1767)*, Haarlem, Noord-Hollands Archief, Archief Hollandsche Maatschappij der Wetenschappen (hereafter: HMdW), toegang 44, inv.nr. 12, p. 26.

37 Lyonet to Van der Aa, May 20, 1762, HMdW, toegang 444, inv.nr. 37.

38 *Ibidem*.

39 See *ibidem*, toegang 44, inv.nr. 12, p. 271; toegang 444, inv.nr. 35, 37, and 96.

40 Zuidervaart, ‘Pieter Gabry’ (n. 9) 300–307.

41 P. Lyonet, ‘Beschryving van een microscoopstel, geschikt tot het ontleden van kleine dieren, mitsgaders eenige aanmerkingen over het vermogen der vergrootende glazen’, in *Verhandelingen uitgegeven door de Hollandse Maatschappij der Wetenschappen, te Haarlem*, part III (Haarlem 1757) 378–413.

42 BML: Arch 162i–n.

*For State, God, and the Sciences*

The study of insects was a quintessential gentlemanly past-time in the eighteenth century, exemplified by a preface to the Dutch translation of Gaspard Guillaud de Beaurieu's *Kort begrip van de historie der insecten*:

I request you to become men of merit; but at the same time I want you to pass the time amusingly [...] Continually direct an attentive eye on the attractive painting, which Nature displays, and you will become wise, you will become satisfied, you will prevent a thousand lamentations, a thousand displeasures. Get used to look at many small and despised objects [...] with attentiveness and wonder, which have received the artfulness and delicate care of the wise Creator [...] it adorns the Enlightened of the world, those patrons of mankind, to learn to attentively and in quiet peace behold God's wonders.<sup>43</sup>

This passage emphasizes the virtues of an enlightened man: he should not linger and be *dienstbaar* (helpful). Studying insects offered a perfect way of combining leisure, contributing to the pursuit of knowledge and truth, and admiring the beauty and wonder of God's creation.<sup>44</sup> This is the type of gentlemanly natural history Lyonet was practicing. In this section, I want to flesh out the goals Lyonet had set for his study of insects. In other words, why was Lyonet, a busy government official, so concerned with the study of insects? The following demonstrates three overlapping goals and motivations: benefiting the public good, the devotion of God through observation, and the gaining of social status.

First, Lyonet appealed to serving the 'public good'. As a master of patents and a cryptographer for the Staten Generaal, Lyonet already held a central place in government, thereby serving the public good. Public good in natural history, however, had a different character. In the case of Réaumur, the influential Parisian naturalist and academician, the place of natural history in relation to the public good (*le bien publique*) took on new meaning—it elevated the naturalist as someone who was devoted to the homeland and useful work. According to Mary Terrall, 'This zeal to benefit the public, an idealized and selfless devotion to useful work, implied nobility as well as manliness.'<sup>45</sup> Terrall points out that the contingency of nobility, utility, and the claim to the public good is noteworthy, since it furthermore stresses that the study of natural history as was considered an appropriate endeavour for a pious and useful gentleman. In both his commentary to the French translation of Lesser's *Insecto-Theologia* as *Theologie des Insectes* and in his own treatise on the anatomy of the caterpillar,

43 'Ik zoek u tot mannen van verdiensten te maaken; maar ik zoek u tevens uw leven vermaakelyk te doen slyten [...] Vestigt geduurig een oplettend oog op het bekoorlyk Schilderstuk, 't welk de Natuur u vertoont, en gy zult wys, gy zult gelukkig worden, gy zult duizend kwyningen voorkomen, duizend ongeneugten weeren. Gewent u inzonderheid om zo veele geringe en veragte voorwerpen [...] met die opmerking en verwondering te beschouwen, welke de zichtbare konst en tedere zorg des wyzen Scheppers, in derzelve maakzel en levenswyze zo heerlyk doorstraalende, van elk redelyk mensch billyk verdienen. [...] zo eerbiedt die Ligten der wereld, die begunstigers van 't Menschdom, die 't zelve leeren in stillen vrede Gods wonderen aandagtig te beschouwen.' G.G. de Beaurieu, *Kort begrip van de historie der insecten*, vol. I (Amsterdam 1768) iv–v.

44 On the topic of 'popular' natural history, see J. Drouin and B. Bensauade-Vincent, 'Nature for the people', in N. Jardine, J.A. Secord and E.C. Spary (eds.), *Cultures of Natural History* (Cambridge 1996) 408–425. On the translation in the Enlightenment, see R. Vermij, 'Translating, Adapting, Mutilating: Or, How to Make an Enlightenment Classic', *Isis* 109.2 (2018) 333–338.

45 M. Terrall, 'Masculine Knowledge, the Public Good, and the Scientific Household of Réaumur', *Osiris* 30 (2015) 187.

Lyonet defends the utility of the study of insects by referring to the public good, which benefits from 'true theology'. In the latter, a fierce defense of the study of insects can be read.

I do not doubt, moreover, that those who reduce everything to their direct utility, find that I have very badly employed my time [...] How many times have I not been reproached for applying the little talent that I have been given, to a subject of this nature, instead of making use of them for objects more useful and refined, or to at least have worked on the human body, if I wanted to dissect [...]<sup>46</sup>

Lyonet justifies the study of the anatomy of insects because it offers a look into the deepest workings of the Creator. Hence, 'pure theology', as Lyonet calls it, ultimately benefits the public good. And both this artificial appeal to the public good and the religious dimension gave Lyonet a ground to observe and draw the anatomy of insects.

The second goal in Lyonet's work, then, was the devotion to God and his creation (the so-called second book of nature) through observation.<sup>47</sup> Microscopical vision was quickly considered as a spiritual experience, since it allowed a view of the smallest and most intricate parts of God's creation.<sup>48</sup> A religious and spiritual dimension of microscopy and the study of the anatomy of insects can, for example, also clearly be seen in Jan Swammerdam's work on the anatomy of insects.<sup>49</sup> The observation of the book of nature was not limited to insects; naturalists – poets, theologians, and natural philosophers – looked at all facets of the natural world out of devotional and spiritual motivation.<sup>50</sup> Such a devotional aspect can clearly be found in Lyonet's monograph, *Traité anatomique*, in which he describes and draws all the complexity and intricacy of one caterpillar's anatomy, layer by layer. This was not a work focusing on the philosophical or theological meaning of insects in general, but a detailed analysis of all the anatomical layers of *one* caterpillar found in the woods surrounding Sorgvliet. Commenting on the observation of the caterpillars, Lyonet writes:

[...] the more I examine it, the more I find complexion and intelligence. Everything contributes to a marked goal. It is a machine composed of various substances [...] A machine, where everything is in motion, which is transported from one place to another; [...] I cannot reflect on all this, without telling myself, this was not done by chance. It must absolutely have been composed by a Being possessing, in the most sublime degree, the most hidden secrets of Hydraulics, *Chymia*, and Mechanics; By a Being, in whom an unlimited intelligence is united to an absolute

46 'Je ne doute pas, au reste, que ceux qui ramènent tout à leur utilité directe, ne trouvent que j'ai bien mal employé mon tems de l'avoir [...] Combien de fois ne m'a-t-on pas reproché d'avoir appliqué le pen de talens que l'on me prête, à des sujets de cette nature, an lien d'en faire usage pour des objets plus utiles & plus rélevés, ou de n'avoir pas du moins travaillé sur le Corps humain, si je voulois dissequer ...' P. Lyonet, *Traité anatomique de la chenille qui ronge le bois de saule* (La Haye 1760) xiv.

47 E. Jorink, *Reading the Book of Nature in the Dutch Golden Age, 1575–1715*, Brill's Studies in Intellectual History 191 (Leiden and Boston 2010).

48 C. Doron, 'The Microscopic Glimpse: Spiritual Exercises, the Microscope, and the Practice of Wonder in Early Modern Science', in S. Vasalou (ed.), *Practices of Wonder: Cross-Disciplinary Perspectives* (Cambridge 2012) 179–200.

49 J. Swammerdam, *Bybel der natuure, of historie der insecten* [...] (Leyden 1738). For a consideration of the religious dimension of Swammerdam's work, see Jorink, *Reading the Book of Nature* (n. 47) 219–239.

50 C.W. Smith, *Empiricist Devotions: Science, Religion, and Poetry in Early Eighteenth-Century England* (Charlottesville, VA and London 2016).

power over matter, and in whom the most compact spaces would not be an obstacle to the execution of the most extensive plans [...]'<sup>51</sup>

Moreover, Lyonet describes his studies of insects not as an objective way of knowing, but rather as a subjective experience of nature. Lyonet writes how he represented the insects the way 'I thought I saw [it]; [the way] it seemed to me; it appeared to me'.<sup>52</sup> In his description of a caterpillar, Lyonet stresses the 'ideal lines' and the perfection present at every level of detail in the anatomy of the caterpillar.<sup>53</sup> Such representations of a caterpillar – and insects in general – are typical of natural theology in the eighteenth century.<sup>54</sup> The divine 'Author' is always present in Lyonet's account, and he continuously stresses the intimacy of his observations.<sup>55</sup> Lyonet's study of insects was quintessentially a form of devotional observation, in which religion and piety were major motivations.

Both Lyonet's goal to benefit the public good and to show his devotion to God helped to solidify his status as a pious and virtuous gentleman. Since piety was considered a universal virtue in the eighteenth-century Dutch Republic, acquiring it through the study of nature added to Lyonet's social status.<sup>56</sup> Although social status was not a means to an end, the status that came with usefully spending one's free time was certainly an asset. Lyonet's membership of the Republic of Letters and learned societies helped to grant him credibility as a virtuous gentleman. Therefore, it is not surprising that on the title page of *Traité anatomique* Lyonet made sure to mention all the learned societies he was a member of, as well as his governmental affiliations, both signifiers of his virtue and utility, as perceived by other illustrious men. The title page can be seen as the place where all of Lyonet's statuses come together to form his persona – the way he was and wanted to be perceived. Similarly, in most correspondence with learned academies Lyonet mentions both his governmental affiliations as well as his memberships of learned societies.

Like Georges-Louis Leclerc de Buffon's natural history at the royal Jardin du Roi in Paris, or Réaumur's scientific household with a museum containing a collection of minerals and insects, natural history was strongly connected with the higher echelons of society.<sup>57</sup> Not

51 '... plus je l'examine, plus j'y trouve d'arrangement & d'intelligence. Tout y concourt à un but marqué. C'est une machine composée de diverses substances ... une machine, où tout est en mouvement, qui se transporte d'un endroit à un autre ... Je ne puis réfléchir sur tout cela, sans me dire, ceci ne s'est point ainsi fait par hasard. Il doit absolument avoir été composé par un Etre qui possède, dans le degré le plus sublime, les secrets les plus cachés de l'Hydraulique, de la Chymie, & des Mécaniques; par un Etre, en qui une intelligence sans bornes se réunit à un pouvoir absolu sur la Matière, & chez qui les espaces les plus resserrés ne sçauroient porter obstacle à l'exécution des Plans les plus vastes ...' Lyonet, *Traité anatomique* (n. 46) xv–xvi.

52 Ibidem vii.

53 Ibidem 22–23.

54 E. Jorink, 'Between Emblematics and the 'Argument from Design': The Representation of Insects in the Dutch Republic', in K.A.E. Enenkel and P.J. Smith (eds.), *Early Modern Zoology: The Construction of Animals in Science, Literature and the Visual Arts*, vol. 1, Intersections: Yearbook for Early Modern Studies 7 (Leiden and Boston 2007) 147–176.

55 E.g. see Lyonet, *Traité anatomique* (n. 46) 8–11, 21, 22, 39–40, 52.

56 E. van der Wall, 'The Religious Context of the Early Dutch Enlightenment: Moral Religion and Society', in W. van Bunge (ed.), *The Early Enlightenment in the Dutch Republic, 1650–1750: Selected Papers of a Conference, Held at the Herzog August Bibliothek Wolfenbüttel, 22–23 March 2001*, Brill's Studies in Intellectual History 120 (Leiden and Boston 2003).

57 E.C. Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago and London 2000) esp. 15–47; Terrall, *Catching Nature* (n. 16) 134–142.

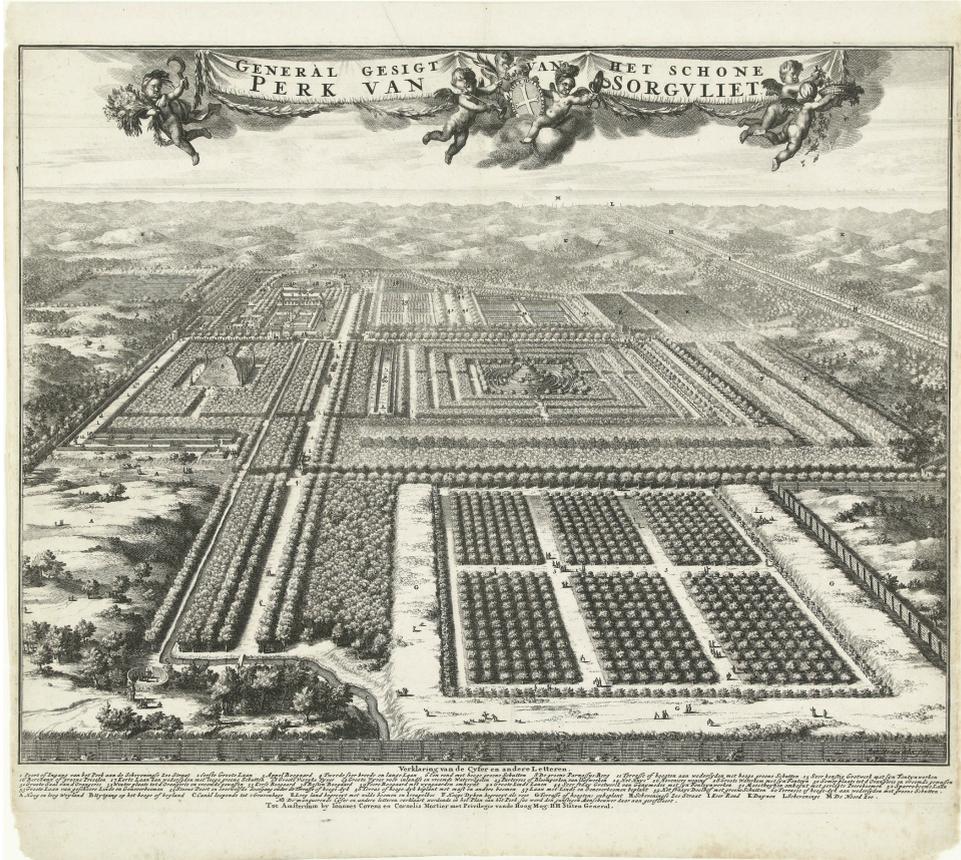


Fig. 3: 'General View of the Gardens of Sorgvliet.' Engraving by Johannes Jacobsz van den Aavele. Amsterdam: Johannes Covens and Cornelis Mortier, with privilege of the Staten Generaal, ca. 1721–1774. Rijksmuseum: RP-P-1902-A-22494, <http://hdl.handle.net/10934/RM0001.COLLECT.335728>.

only did it require strong social connections, as we have seen in the case of Lyonet, but also an expensive cabinet, where shells, fossils, and insects could be observed and displayed. While Réaumur was acting as a head of a scientific household, managing both the production of knowledge in the gardens, cabinets and artist workshops, he also maintained vital social relations, such as the ties between the household and the Académie des Sciences.<sup>58</sup> In the same way, Lyonet depended on such facilities. As we have seen, Trembley and Bentinck generously assisted him in solidifying social relations and entering learned societies; but they also provided a garden for him where he could carry out his studies. The Bentinck estate, Sorgvliet, functioned as a center for the production of natural historical knowledge. The estate was just outside The Hague, where Lyonet worked, and its large gardens were based on French garden architecture.<sup>59</sup> Yet the gardens still preserved some original natural

<sup>58</sup> Ibidem 44–78; Idem, 'Masculine Knowledge' (n. 45).

<sup>59</sup> V. Bezemer-Sellers, 'The Bentinck Garden at Sorgvliet', in J.D. Hunt (ed.), *The Dutch Garden in the Seventeenth Century* (Washington, DC 1990) 99–129.

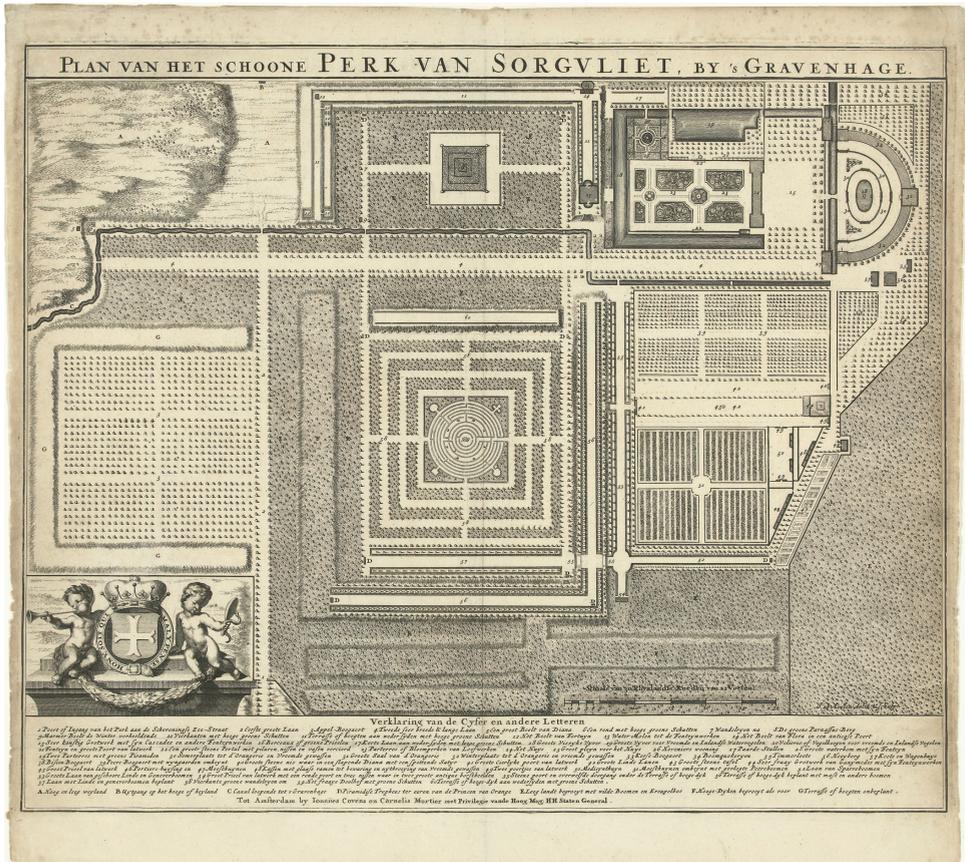


Fig. 4: 'Design of the beautiful Garden of Sorgvliet, near The Hague'. Engraved by Johannes Jacobz van den Aveele. Amsterdam: Johannes Covens and Cornelis Mortier, with privilege of the Staten Generaal, ca. 1721–1774. Rijksmuseum: RP-P-1902-A-22497, <http://hdl.handle.net/10934/RM0001.COLLECT.335729>.

forms, such as a natural rivulet and the surrounding dunes and woods (see figs. 3 and 4). Trembley was a diplomat for the Bentinck family and carried out his research from the 1740s onwards at Sorgvliet. As such, Sorgvliet was a place where politics and natural history could meaningfully co-exist and cross-pollinate. It is here that Lyonet's roles as a naturalist and government official could seamlessly overlap and reinforce each other.

### Conclusion

Tellingly, Lyonet's three main virtues – devotion to God, devotion to the state, and good moral behavior – are all emphasized in an eulogy published shortly after his death in 1789.

He was a friend of all who practised and cherished the Arts and Sciences. From his youth onwards, his conduct was always irreproachable. He was a Christian from conviction, was truly fond of the virtue, the divine worship, and his father, and propagated this publicly. [...] always having one ground rule, to do nothing willfully, when it could hurt honor, duty, or conscience.

One can say in truth, that erudition, arts sciences – particularly that of natural history–, fatherland and true divine worship, are obliged to him, and did not lose little with his death; in one word, that he bestowed his fatherland with extraordinary honor.<sup>60</sup>

This eulogy highlights some of the most sought-after characteristics of a gentleman scholar in the eighteenth century: dedication to the arts, sciences, fatherland, and etiquette (honor and duty). Similar memories of Lyonet are also repeated in a biography written by S.E. Croiset, his nephew and successor in government.<sup>61</sup> Similar biographies with a strong focus on virtue persisted until the end of the nineteenth century.<sup>62</sup> W.H. van Seters replaced that narrative by focusing on Lyonet's drawing and works, and consequently retroactively hailed Lyonet as one of the first entomologists.<sup>63</sup> This paper has sought to nuance that view by focusing on the social dimensions of Lyonet's naturalist practices.

To conclude, Lyonet's work on the study of insects cannot be considered without their profound social dimensions and motivations. His success as a naturalist largely depended on his local connections and his position within the noble and governmental economy of social status. As has been shown, Lyonet's ability to correspond with Réaumur almost entirely hinged on Trembley's careful introduction. Similarly, Lyonet could only gain access to the Royal Society in London, and subsequently other learned societies, on account of the recommendations by Trembley, Willem Bentinck, and his new correspondent, Réaumur. The success of a naturalist thus depended on his local connections, and usually these were nobles whose names carried considerable weight (such as Bentinck's).

Once settled in the learned world, Lyonet aimed to serve the public good with his so-called 'pure theology'. His microscopical and natural historical work on insects was not in any way a form of 'scientific' or 'empirical' observation; the religious overtones in his work are abundant. This way, Lyonet could serve the state (or the 'public good'), worship God by studying his creation, and acquire social status as a virtuous gentleman. These gentlemanly virtues could be practiced and displayed through Lyonet's microscopical studies of insect anatomy. Just like Peter Gabry, whose downfall Lyonet had helped bring about,<sup>64</sup> Lyonet found the added status and prestige he did not get by means of a noble birth in the gentlemanly study of nature. Fortunately for Lyonet, his attempts to gain social status and prestige through the pursuit of natural history was more successful. Although Lyonet is not remembered as a stellar entomologist, his exemplary eighteenth-century virtuous behaviour and social status is worthy of our attention.

60 'Hy was een vriend van allen die Kunsten en Wetenschappen oeffenden en beminden. Van zyne jeugd af aan is zyn gedrag altyd onberispelyk geweest. Hy was uit overtuiging een Christen, beminde de deugd, de Godsdienst en zyn Vaderland opregtelyk, en kwam daar altoos opentlyk voor uit. ... hebbende altoos voor een grondregel gehad, niets opzettelyk te doen, 't geen eer, plicht of geweten, enigzints kon kwetzen.

Naar waarheid kan men zeggen, dat Geleerdheid, Kunsten, Wetenschappen, byzonderlyk die der Natuurlyke Historie, Vader en ware Godsdienst aan hem verpligt zyn, en niet weinig aan zyn dood verloren hebben; in een woord, dat hy zyn Vaderland tot ongemene ere strekt.' 'Verslag der Levenbyzonderheden en Geleerde Werken, van wylen den Heer P. Lyonet,' *Algemeene Kunst- en Letterbode* 41 (April 10, 1789): 116.

61 S.E. Croiset's draft of a proposal to succeed Lyonet as Secretary of Numbers, BML: Arch 162z, 3b.

62 S.C. Snellen van Vollenhove, 'Levenschets van Mr. Pierre Lyonet,' *Album der Natuur* 29 (1880) 1–14.

63 Van Seters, *Pierre Lyonet* (n. 3) esp. 'Troisième partie: Lyonet entomologiste' 63–160.

64 Zuidervaart, 'Peter Gabry' (n. 9).