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IN WESTERN CIVILIZATION**



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The Cambridge Platonists in Continental Europe

Critique and Erudition in the *Bibliothèques* of Jean Le Clerc

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1. Jean Le Clerc and Ralph Cudworth

In the 17th and early 18th centuries, Jean Le Clerc (1657–1736), the Swiss-Dutch Arminian pastor, philologist, theologian and erudite journalist, contributed significantly to the dissemination of knowledge to a large European audience. He was one of the most popular intellectuals of his time and author of the famous *Bibliothèques*,¹ which, for over 40 years, covered topics such as history, law, theology and philology. He also seldom failed to include an excerpt from some new book or discovery in the natural sciences, a field which will be of particular importance within the present article. In so doing, he went some way towards satisfying the early modern thirst for natural science, which had been sparked by discoveries in, for example, astronomy and biology. Le Clerc's presentation of natural science was complemented by his passion for English scholarship, by means of which he made French summaries of English publications available to non-English speaking Continental Europe. These characteristic features of his journalistic work, an attention to natural sciences and to English scholarship, placed the *Bibliothèques* at a considerable advantage with respect to other contemporaneous literary journals.² The present article explores Le Clerc's relationship with Cam-

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1 He authored three learned journals, the *Bibliothèques* (published in Amsterdam): the *Bibliothèque universelle et historique*, in 26 volumes, of which 25 appeared between 1686–1693 and the last volume, containing indexes, in 1718; the *Bibliothèque choisie pour servir de suite à la Bibliothèque universelle*, in 28 volumes, of which 27 were published between 1703–1713 and the last volume, with indexes, in 1718, and finally the *Bibliothèque ancienne et moderne pour servir de suite aux Bibliothèques Universelle et Choisie*, in 29 volumes, 28 of which appeared between 1714–1727 and the last one, with indexes, in 1730.

2 Annie BARNES, Jean Le Clerc (1657–1736) et la République des lettres, Paris 1938, 116.

bridge Platonism, in particular with the thought of Ralph Cudworth (1617–1688), as presented in the *Bibliothèques*.

It is often suggested that Le Clerc's interest in Cudworth was brought about by Le Clerc's epistolary acquaintance with Cudworth's daughter, Damaris Cudworth Masham. Le Clerc had been introduced to her by his friend John Locke,³ who resided at her home at Oates in the final years of his life. In a letter of 13th January 1699, Le Clerc sent thanks to Lady Masham through John Locke for her recent gift of her father's work, with high probability Cudworth's *True Intellectual System of the Universe*.⁴ Their direct correspondence continued after Locke's death. Cudworth's name, as well as that of Henry More, appeared in a letter which Le Clerc received from his close friend the Arminian Philipp van Limborch, dated 6th October 1682, while Le Clerc was living in London for a short time.⁵ Limborch recommended that Le Clerc make friends "cum viris doctis et ingenii liberioris pacisque Christianae amantibus in Academia Cantabrigiensi", to whom he would happily introduce him. Although, so far as we know, Le Clerc did not meet any of the Cambridge Platonists in person, he would read some of their works, especially Cudworth's, early on in his scholarly career. Again, this is evidenced in Le Clerc's letters; in a letter of 2nd October 1690 to Claude Nicaise, Le Clerc explicitly praised Cudworth as scholar, especially his knowledge of patristic doctrines of the Trinity. In a related article of his *Bibliothèque universelle et historique*, he referred to Cudworth's *True Intellectual System of the Universe* as containing a good exposition of that subject.⁶

The mutual intellectual influences shared by Dutch Arminians and Cambridge Platonists, of course, antedated Le Clerc.⁷ They shared common ground from the outset, in their Erasmian heritage, their focus on free will, their tolerant

3 Locke had become a good friend of Le Clerc during his "exile" in the Netherlands between 1683 and 1689. Upon Locke's return to England, he had been a guest of Lady Masham in Oates, Essex. Le Clerc and Lady Masham never met in person but corresponded.

4 This is suggested by Mario Sina, who considers it as highly likely. See Jean Le Clerc, *Epistolario*, vol. 2, 1690–1705, ed. by Mario SINA/Maria Grazia ZACCONE SINA, Florence 1991, 295 note 1.

5 Le Clerc was in London from May 1682 to January 1683, see BARNES, Jean Le Clerc (n. 2) 68–74.

6 Jean Le Clerc, *Bibliothèque universelle et historique*, vol. 19 (1690) Art. 7, 539. Le Clerc referred to this aspect of Cudworth's thought in several letters. See letter 2 of 2nd October 1690, from Le Clerc to Claude Nicaise; letter 335 of 8th January 1703, from Le Clerc to Jean Paul Bignon and letter 361, of 29th April 1704, from Le Clerc to John Sharp, all of which are published in: Le Clerc, *Epistolario*, vol. 2 (n. 4). In these letters, Cudworth is esteemed by Le Clerc as scholar who was knowledgeable about the conception of the Trinity in pre-Nicene Fathers.

7 See the contribution of Marilyn A. Lewis in this volume.

approach to religion and their rationalist exegesis.⁸ English thinkers had contact with Arminians, such as Baro and Vossius, in the last decade of the 16th century.⁹ Contrary to the situation in the Netherlands, where Arminianism was officially condemned by the Synod of Dort (1619), it flourished in the Laudian High Church movement in England during the early 17th century.¹⁰ Later in the century, Henry More and Ralph Cudworth became acquainted with Samuel Hartlib and Franciscus Mercurius van Helmont, who lived in England for some time. Through them, they came into contact with Philipp van Limborch, then professor at the Remonstrant (Arminian) Seminary of Amsterdam.¹¹ Epistolary contact between van Limborch and Cudworth lasted until the latter's death.¹² So, Le Clerc's interest in Cudworth was not without foundation because of a tradition which he and Cudworth shared. As we have seen, his personal acquaintances also contributed to his knowledge of the Cambridge scholar as an Arminian, but his encounter with some of Cudworth's ideas antedates these contacts. In the following sections we will review more particularly some of Cudworth's philosophy and theology, with particular attention to its natural scientific and natural philosophical underpinning, and this will shed further light on why Le Clerc chose to disseminate Cudworth's work in his *Bibliothèques*. Before we move to the natural philosophical debate itself, I will present a few contextual remarks on the ongoing debate of which Cudworth's work came to form part.

2. Scientific discoveries, philosophy and theology

In the first edition of his *Dictionnaire historique et critique* of 1697, under "Pau-liciens", the famous Pierre Bayle (1647–1706) had brought up the example of a mother who, knowing that her daughter would go to a ball, be seduced and lose her virginity, still allowed her to go. Bayle doubted that the behaviour of such a mother could be considered as good and caring in any way and regarded it rather as inappropriate. The mother should not knowingly have allowed her daughter to go to the ball, thus protecting her from any harm although against her will. By means of this example, Bayle argued against the possibility of rationally reconcil-

8 Susan ROSA, Ralph Cudworth in the République des Lettres. The Controversy about Plac-tick Nature and the Reputation of Pierre Bayle, in: *Studies in Eighteenth-Century Culture* 23 (1994) 147–160, 148.

9 Rosalie L. COLIE, *Light and Enlightenment. A study of the Cambridge Platonists and the Dutch Arminians*, Cambridge 1957, 14.

10 Ibid. 21. See Nicholas TYACKE, *Anti-Calvinists. The Rise of English Arminianism, c. 1590–1640*, Oxford 1987.

11 COLIE, *ibid.* 7.

12 Ibid. 36.

ing the commonly attributed goodness of God with the actual presence of evil in the world. If God was good, so ran the argument, why did he allow evil? In the example of the mother, she was held responsible for not protecting her daughter and could not rationally be considered good. So also God, who had allowed Adam's sin and all the evils resulting from it, could and should have prevented it.¹³ With these arguments, and especially the (for the time) shocking example of the uncaring mother, Bayle had brought the problem of evil back to the centre of learned discussions. Other prominent thinkers of the time, like Isaac Jacquelot (1647–1708), took up the challenge and qualified the image with the statement that there was a substantial difference between God and a mother. If one was to apply the image accurately, one could say that, if the mother had an important plan (*Dessein*) for her daughter, then she would be acting in the right way if after having instructed her she allowed her to go to a ball.¹⁴ God's plan, for Jacquelot, was to be able to reward the virtuous (and punish the wicked) and this in turn presupposed human freedom.¹⁵

The discussion about the problem of evil was part of a larger attempt at the time to reconcile God's and nature's workings, but even a brief review of the major positions of such a debate would lead us away from the proposed goal of this article.¹⁶ The debate on the problem of evil was taken up by all of the most promi-

13 Pierre Bayle, Art. Pauliciens, in: id., *Dictionnaire historique et critique*, vol. 2, Rotterdam 1697, 756 note E. A counter-argument that Bayle rejected was the Socinian one on the eternity of matter, the consequence of which, for Bayle, limited God's foreknowledge. God could thus not be blamed for the existence of evil and the latter did not conflict with his goodness: *ibid.* 758 note F. See also Barbara Sher TINSLEY, *Pierre Bayle's Reformation. Conscience and Criticism on the Eve of the Enlightenment*, Susquehanna PA 2001, 313 f.

14 Isaac Jacquelot, *Conformité de la foi avec la raison: ou défense de la religion, contre les principales difficultez répandues dans le Dictionnaire historique et critique de Mr. Bayle*, Amsterdam 1705, 201.

15 *Ibid.* 198. 202 f. See Alan C. KORS, *Naturalism and Unbelief in France, 1650–1729*, Cambridge 2016, 246 f., for a summary of all the subsequent works where the dispute between Bayle and Jacquelot continued.

16 KORS, *ibid.* 215, has summarized this point movingly: "Questions about a demonstrably transcendent and benevolent Creator – metaphysically prior to the world – were and remained among the most dizzyingly complex for Christian philosophical theology. Issues of creation ex nihilo and issues of how evil could co-exist with an infinitely good and powerful God attracted potent and influential minds. The attention to those issues in early-modern France, occurring in the fractious climate we have come to know, were both symptoms and further causes of a crisis of confidence affecting broad parts of intellectual life. By the dawn of the eighteenth century, orthodox beliefs about creation and the origin of evil were under various forms of siege." Another major debate to which these discussions were related was the one between Calvinists and Remonstrants in Protestantism and Jansenists and Jesuits in Catholicism. In both cases the main topic was the nature of God's providential actions in the world and the space for human freedom. For a review of the debate, see Andreas J. BECK, *God, Creation, and Providence in Post-Reformation Reformed*

nent thinkers, from Gassendi to Descartes, Malebranche and others. They either offered tentative solutions or simply indicated that they were aware of the question.¹⁷ In Bayle's view, such a problem represented the ultimate stepping stone for a reconciliation of reason and religion, and the only acceptable solution, from a Christian point of view, was to submit reason to revelation and accept with faith the message of Scripture.¹⁸ The realm of the divine and that of the rational were thus separated. Bayle's reflection was particularly shocking because he had stated, although expressly denying his adherence to it,¹⁹ that the Manichean position was, from a purely rational point of view, very sound.²⁰ Manicheans believed that good and evil should be attributed to two distinct principles, one good and one evil.²¹ In this way, evil had its own author as did good, and none of the attributes ascribed to the two principles would be mistakenly assigned to the other.

In 1699, two years after having seen Bayle's *Dictionnaire*, Le Clerc reacted to this in *Parrhasiana*, setting up an imaginary dialogue on the problem of evil between a Manichean and an Origenist. Le Clerc stressed the determinism of the Manichean position, in that the evil principle led human beings necessarily to vice and God's punishment. He pleaded instead for human freedom. Unsurprisingly, the Origenist, who held Le Clerc's position, won the argument by emphasizing the responsibility of man and his freedom to act morally or immorally. Moral evil was understood to be caused by human choices, and physical evil, too, depended on the responsibility of human beings, because it was regarded by him (or better, by the Origenist) as a consequence of or punishment for moral evil.²² As in the case set out by Jacquelot, God had given freedom to man to allow for virtuous moral behaviour that would later be rewarded: "S'il ne l'empêche pas, quoi qu'il le voie, & qu'il puisse nous retenir dans nôtre devoir; c'est qu'il nous a fait libres, pour donner lieu à la Vertu & au Vice, au blâme & à la louange, à la recompense & aux peines."²³ Bayle did not let these remarks go unchallenged; he replied to Le Clerc's

Theology, in: Ulrich L. LEHNER/Richard A. MULLER/A. Gregg ROEBER (eds.), *The Oxford Handbook of Early Modern Theology, 1600–1800*, Oxford 2016, 195–212.

17 KORS, *ibid.* 233, 238–241.

18 Bayle, Art. Pauliciens (n. 13) 758 f. note F. Thus Bayle's opponents (among whom we will find Le Clerc) considered his view as a threat to the rationality of revelation, whereas others interpreted it as proposing a form of scepticism: KORS, *ibid.* 243 f.

19 Bayle, Art. Manichéens, in: *id.*, *Dictionnaire* (n. 13) 527 note B.

20 *Ibid.* 529–532 note D.

21 *Ibid.*

22 Jean Le Clerc, *Parrhasiana, ou Pensées diverses sur des Matières de Critique, d'Histoire, de Morale, et de Politique. Avec la Défense de divers Ouvrages de Mr. L. C.*, vol. 1, Amsterdam 1699, 307 f.

23 *Ibid.* 306. Further arguments were also added by Le Clerc in support of his Origenian position, stating the inconsistency of this-worldly physical evil and of vicious actions when compared to eternity, or his opinion that this relatively small evil is in reality like a bit-

arguments in the second edition of his *Dictionnaire*, under “Origene”. Here he restated his initial points to show what, in his view, rational *aporia*s were contained in the libertarian explanation of evil proposed by Le Clerc.²⁴

In the remainder of this article, I will review the development of this debate, although not in its entirety because of my focus on a few specific points of natural philosophy. The ensuing debate from Bayle’s *Dictionnaire* articles and Le Clerc’s reply in *Parrhasiana*, as well as other exchanges that followed – for Le Clerc especially in the *Bibliothèque choisie* – attracted a large audience.²⁵ At this point, it is crucial to stress that Cudworth’s influence on Le Clerc’s arguments must be considered as instrumental to the ongoing debate with Bayle on the problem of evil.²⁶ Interconnected with this debate was another on the existence of God and, generally, on the existence of an immaterial reality that transcends the visible matter of this world. The rational solution to the problem of evil proposed by Bayle – the Manichean one – was not acceptable to the usual Christian understanding of the divine principle, nor was the resort to a purely ‘naturalistic’ explanation of evil as the by-product of natural laws independent of God. Such an option would ultimately make God superfluous and thus favour atheism and materialism. In this sense, Cudworth found a specific place in Le Clerc’s argumentation, especially on the question of the existence of God. This question was considered by the two authors in line with the overall philosophical background of their positions, with Le Clerc countering and Bayle favouring atheism.

For Le Clerc, the problem with atheism was not primarily religious. He certainly did not wish society at large to be atheistic, but neither did he condone the use of any violence in the name of religion.²⁷ God alone would punish or reward every human being according to their own choices in life.²⁸ But Le Clerc

ter medicine. He also paved the way for the possibility of a final *apokatastasis*, were God repairs all damage sustained in the world for eternity and where his choice of allowing a little time (compared to eternity) before acting in this way, seems more than justified. The fundamental point remains, however, that human beings and not God are the cause of their evils: *ibid.* 309–312.

24 Le Clerc replied directly to the second edition of Bayle’s *Dictionnaire*, but I was able to review only the first and the fifth edition. Bayle, Art. Origene, in: Pierre des Maizeaux (ed.), *Dictionnaire historique et critique*, par Pierre Bayle, Cinquieme edition, revue, corrigée, et augmentée, vol. 3, various locations 1740, 542 f. note E.

25 KORS, *Naturalism* (n. 15) 246.

26 See for example the preface of the *Eloge Historique de feu Mr. Jean Le Clerc* composed by Jean Barbeyrac (1674–1744), published as Appendice C in: Jean Le Clerc, *Epistolario*, vol. 4, 1719–1732, ed. by Mario SINA/Maria Grazia ZACCONE SINA, Florence 1997, 467–501. See KORS, *ibid.* 256.

27 Jean Le Clerc, *De l’incroyance, où l’on examine les motifs & les raisons générales qui portent les incroyants à rejeter la religion chrétienne. Avec deux lettres où l’on en prouve directement la vérité*, Amsterdam 1696, 154–156.

28 *Ibid.* 220–222.

saw atheism (and a purely materialistic world) as indissolubly interconnected to a deterministic-mechanistic worldview and consequently preventing any possible human freedom and personal responsibility.²⁹ This would ultimately result in an immoral or amoral society.³⁰ Whereas Bayle had no problem with the idea that an atheist could be living a morally sound life, perhaps even more moral than that of an orthodox Christian, Le Clerc could not accept this, as we have just seen.³¹ Cudworth's arguments as adopted by Le Clerc must therefore be viewed as an attempt to restore a healthy relationship between God and his creation and recover a spiritual order within matter. Such a framework ultimately had the capacity to allow for human freedom and thus provide a foundation for the possibility for moral behaviour. This appropriation of Cudworth's thought does seem to respect Cudworth's intention in his Origenian libertarian framework, which could not be supported by a purely mechanistic, materialistic and atheistic understanding of the world, even if the difficulties posed by the problem of evil seemed to point in that direction.³² In other words, Cudworth's ideas were to lay the foundation for an idea of libertarian freedom and human responsibility of an Origenian kind (explicitly in Cudworth),³³ which could be held firmly when scholars' understand-

29 Jean Le Clerc, *Bibliothèque choisie*, vol. 2 (1703) Art. 1, 68.

30 *Ibid.* vol. 9 (1706) Art. 3, 170 f.

31 Pierre Bayle, *Pensées diverses, Ecrites à un Docteur de Sorbonne, a l'occasion de la Comète qui parut au mois de Decembre 1680*, 2 vols., Rotterdam 1683, vol. 1, 392–397; vol. 2, 430–432. See also Jonathan I. ISRAEL, *Radical Enlightenment. Philosophy and the Making of Modernity, 1650–1750*, Oxford 2001, 331–341.

32 Douglas HEDLEY, *Cudworth on Freedom. Theology, Ethical Obligation and the Limits of Mechanism*, in: Alfons FÜRST/Christian HENGSTERMANN (eds.), *Die Cambridge Origenists. George Rusts Letter of Resolution Concerning Origen and the Chief of His Opinions* (Adamantina 4), Münster 2013, 47–58, 54: “Cudworth's problem is as following: If the realm of nature is exclusively a domain of mechanical explanations, how can we account for human behaviour? Where is the axiological dimension of the world? If human beings are merely the products of efficient causation and cannot effect right or wrong actions, wherefore punishment?” And *ibid.* 58: “Here we find the deep impression of Origen amidst a remarkable attempt to engage the leading mechanical philosophers of the age over the question of freedom in the context of the scientific revolution.”

33 Regarding Cudworth's Origenism, see Douglas HEDLEY, *Sacrifice Imagined. Violence, Atonement, and the Sacred*, New York 2011, 114–119; Christian HENGSTERMANN, *George Rusts Letter of Resolution Concerning Origen and the Chief of His Opinions. Manifest eines neuzeitlichen Origenismus*, in: FÜRST/HENGSTERMANN, *Cambridge Origenists* (n. 32) 11–45, 17–19. That Le Clerc's conception of freedom is Origenian is far less clear. The attachment of the Arminian to the work of Origen was more general and ambivalent and seems to suggest that Le Clerc did not have a more particular sympathy for Origen than for any other author, modern or ancient, among those whom he found to be close to his own ideas. See Mario SINA, *Origenismo e anti-agostinismo in Jean Le Clerc diffusore della cultura inglese*, in: Marialuisa BALDI (ed.), “Mind senior to the world”. *Stoicismo e origenismo nella filosofia platonica del Seicento inglese*, Milan 1996, 293–312.

ing of nature was changing drastically.³⁴ The problem of evil and the related problems of materialism and atheism had thus to be overcome at different levels, not only philosophically-theologically, but also at the level of natural philosophy. It is to this specific layer of the debate that I will turn in the following sections.

Scholarship has often failed to pay adequate attention to the natural scientific debate in which both Le Clerc and Cudworth were immersed, although much more attention has been paid to the more theological-philosophical debate, that is, to Cudworth's presence in the *Bibliothèque choisie* as instrumental in countering the spread of materialism and atheism in seventeenth-century Europe.³⁵ This stress on the theological-philosophical implications of Cudworth's thought is surely justified and reflects the nature and primary scope of Le Clerc's review of Cudworth's work. Le Clerc stressed the potentially apologetic nature of Cudworth's thought in his autobiographical *Joannis Clerici vita et opera* (1711), where he affirmed, with reference to his presentation of Cudworth: "Cum nemo Atheorum argumenta melius exposuisset ac refutasset, nec firmiora Religionis fundamenta posuisset."³⁶ However, a large proportion of Le Clerc's references to Cudworth also included detailed discussions on how to *integrate* biological discoveries *with* philosophy and theology. While atheism was certainly a matter of great concern to both Le Clerc and Cudworth, natural science also weighed heavily in their arguments, and their natural philosophy was not only concerned with a generalized attempt to

34 In this sense, Cudworth's work must also be understood as an attempt to elaborate on Cartesian philosophy, recovering the spiritual dimension of a mechanistic universe: COLIE, *Light and Enlightenment* (n. 9) 56 f.

35 See COLIE, *ibid.* 117–144; Manlio IOFRIDA, Note sul pensiero teologico e filosofico di Jean Leclerc, in: ASNSP.L III/9.4 (1979) 1497–1524; Justin E. H. SMITH/Pauline PHEMISTER, Leibniz and the Cambridge Platonists, in: Pauline PHEMISTER/Stuart BROWN (eds.), *Leibniz and the English-Speaking World*, Dordrecht 2007, 95–110; KORS, *Naturalism* (n. 15) 272–288; John W. YOLTON, *Thinking Matter. Materialism in Eighteenth-Century Britain*, Minneapolis MN 1983, 3–12; ROSA, *Ralph Cudworth* (n. 8) 147–160; Luisa SIMONUTTI, Bayle and Le Clerc as Readers of Cudworth. Aspects of the Debate on Plastic Nature in the Dutch Learned Journals, in: *Geschiedenis van de Wijsbegeerte in Nederland* 4 (1993) 147–165; Jonathan I. ISRAEL, *Enlightenment Contested. Philosophy, Modernity, and the Emancipation of Man 1670–1752*, Oxford 2006, 444–457; Insa KRINGLER, *Die gerettete Welt. Zur Rezeption des Cambridger Platonismus in der europäischen Aufklärung des 18. Jahrhunderts*, Berlin 2013, 88–118.

36 Jean Le Clerc, *Joannis Clerici ... Vita et opera ad annum MDCCXI. Amici ejus opusculum, philosophicis Clerici operibus subjiciendum*, Amsterdam 1711, 128. See also a letter that Le Clerc sent to John Sharp on 3rd March 1705, speaking about his work on Cudworth in *Bibliothèque choisie*, *Epistolario*, vol. 2 (n. 4), Letter 389, 540–542, 541: "Igitur inter libros omnis generis, de quibus illic ego, subinde eos misero, ex quibus utilissimae possint hauriri doctrinae; quas etiam libentius ab aliis, me interprete, audiunt; quam si ipse eas meo nomine proferrem. Cudworthum omnes mirantur, praeter paucos quosdam Philosophiae non sanae addictos; quibus dolet tam gravibus argumentis oppugnari Atheismum, et defendi Religionem."

confute mechanism.³⁷ Thus, a review of the debate on nature provides a more balanced and complete picture of the career of Cambridge Platonism in early modern Europe, at least in literary journals.³⁸ This is not to diminish the theological and philosophical implications connected with the debate, but to review carefully many of the related natural-philosophical aspects that have been neglected. Once again, such an analysis is very relevant to show how, in the specific discussion of natural philosophy, Le Clerc's critical engagement with Cudworth provided a way to clear the path for Origen's libertarian freedom in Europe. As Douglas Hedley has affirmed, in Cudworth, interest in natural philosophy "was closely linked to a concern with the question of freedom and responsibility".³⁹

A recovery of the natural scientific debate that was initiated by Cudworth, as presented by Le Clerc, allows us to gain a more holistic insight into the successful reception of Cudworth's thought in Continental Europe. This success might be only partially explained by his arguments against atheism and mechanism; its natural scientific side suggests a further plausible explanation, which we will explore in this article. Interest in Cudworth was far reaching. His name was mentioned as far away as Wallachia,⁴⁰ and his theory of "plastic nature", which we shall examine below, may have influenced the thought of Gian Battista Vico in Naples.⁴¹ Also, the spread of Cudworth's ideas on the Continent through the *Bibliothèque*

37 Le Clerc's presentation of Cudworth is often associated with the ensuing heated dispute on divine providence and goodness, initially between Le Clerc and Pierre Bayle but later also between Leibniz and the Arminian Samuel Clarke (1675–1729). This aspect of the question, already the subject of scholarly discussion, is beyond the scope of the present article. For detailed studies, see COLIE, *Light and Enlightenment* (n. 9); ROSA, *Ralph Cudworth* (n. 8); KORS, *Naturalism* (n. 15).

38 As we shall see, Cudworth's theory was discussed not only in Le Clerc's journals, but also, as an effect of the dispute with Bayle, in other European journals. For an overview of this discussion, see KORS, *ibid.* 257–264, 279–281. For an introduction into the debate, see HEDLEY, *Cudworth on Freedom* (n. 32), and SIMONUTTI, *Bayle and Le Clerc* (n. 35). The same debate developed beyond the Le Clerc–Bayle controversy, with the later intervention of such prominent thinkers as Leibniz, the authors of the Jesuit *Journal de Trévoux*, Claude-François Alexandre Houtteville and Samuel Clarke.

39 HEDLEY, *ibid.* 53.

40 Antoine Epis, secretary of the Vaivode of Wallachia, in a letter of 8th October 1721, alludes to the fact that the Vaivode had read Cudworth's excerpts with such close attention as to be able to point out that Le Clerc's work had not been completely faithful to Cudworth's book. See Le Clerc, *Epistolario*, vol. 4 (n. 26), Letter 695, 122–125.

41 This thesis is supported by Nicola Badaloni as mentioned by Mario Sina. Badaloni had contended that Vico's concept of "forma plastae" had been influenced by Le Clerc's review of Cudworth's "plastic natures" in *Bibliothèque choisie*. Sina, however, does not agree with him and sees Vico as influenced more by Renaissance thinking than Le Clerc's or Dutch theories. For Sina, Vico would have made it expressly clear if he was in any way "dependent" on Le Clerc, and such a link would have been confirmed by Le Clerc: MARIO SINA, *Vico e Le Clerc. Tra filosofia e filologia*, Naples 1978, 82–86.

choisie continued until at least the end of the 18th century. Le Clerc's excerpts were even preferred to Cudworth's original English version.⁴² The *Bibliothèque choisie* was reprinted many times and became recommended reading, referenced (specifically including Cudworth's ideas as presented by Le Clerc) by prominent figures such as Voltaire and the *Encyclopédistes*.⁴³ Sarah Hutton has affirmed that Cudworth's ideas were debated well into the 19th century,⁴⁴ and a discussion in 1860 referred to Cudworth and Le Clerc (and to Bayle).⁴⁵

3. „Plastic nature“ and animal generation

From 1673, Le Clerc studied philosophy in Geneva under Jean-Robert Chouet, learning both the standard traditions of philosophy and the new Cartesian ideas. As a teacher, Chouet was a Cartesian pioneer.⁴⁶ On the process of animal generation, Descartes thought that animals were generated from matter, through a mixing of the male and female seed in a movement caused by heat.⁴⁷ Similarly, Chouet believed that heat was an important factor in the generation of animals, in that it excited the particles of animal semen and blood.⁴⁸ In both cases, the process of the generation of animals was considered to be purely mechanistic and material, dismissing Aristotelian substantial forms as an ordering faculty. However, dissatisfaction grew with the Cartesian solution. Particular objections focused on the specificity of bodily organs, their function and the complexity that could now be observed through the microscope by famous scientists of the time, such as Leeuwenhoek, Malpighi, Swammerdam, Hooke and Grew.⁴⁹ An ordering (and possibly immaterial) intelligence seemed necessary to account for particular fea-

42 KORS, *Naturalism* (n. 15) 272.

43 ROSA, *Ralph Cudworth* (n. 8) 156; KORS, *ibid.*; Paul JANET, *Essai sur le médiateur plastique de Cudworth*, Paris 1860, 5.

44 *Ralph Cudworth, A Treatise Concerning Eternal and Immutable Morality, with A Treatise of Freewill*, ed. by Sarah HUTTON, Cambridge 1996, x.

45 See JANET, *Essai* (n. 43).

46 On Chouet's Cartesian teaching, see Mario SINA, *Con Jean Le Clerc alla Scuola Cartesiana*, in: *id.*, *Studi su John Locke e su altri pensatori cristiani agli albori del secolo dei lumi*, Milan 2015, 405–419.

47 Vincent AUCANTE, *Descartes's Experimental Method and the Generation of Animals*, in: Justin E. H. SMITH (ed.), *The Problem of Animal Generation in Early Modern Philosophy*, Cambridge 2006, 67–70.

48 Jean-Robert Chouet, *Syntagma Physicum*, ed. by Elena RAPETTI, in: Mario SINA/Marco BALLARDIN/Elena RAPETTI (eds.), *Jean-Robert Chouet. Corsi di Filosofia*, vol. 2, Florence 2010, 9–274, 233.

49 Andrew PYLE, *Malebranche on Animal Generation. Preexistence and the Microscope*, in: SMITH, *Animal Generation* (n. 47) 194–214, 201.

tures of organs.⁵⁰ Philosophically, some attempts were made in another direction, abandoning Descartes's epigenetic doctrine. Malebranche, for example, believed in preformism: animal generation brought forth only that which pre-existed, that is, animals existed from a first creation and each animal contained in itself future animals in miniature.⁵¹ Similarly, Leibniz maintained that animal birth consisted only in an addition of matter to an already fully formed and organized body.⁵²

Between 1703 and 1706, Le Clerc published a number of carefully selected excerpts from Cudworth's *True Intellectual System* (originally published in 1678), mostly following the structure of Cudworth's book and adding commentaries to it. Starting with the third article in the first volume of his *Bibliothèque choisie*,⁵³ he dedicated two articles to Cudworth's review of ancient philosophers' conceptions of matter. In a third article, Le Clerc began to set out Cudworth's crucial concept of "plastic nature": "a Subordinate Instrument of Divine Providence, in the Orderly Disposal of Matter; but yet so as not without a Higher Providence presiding over it, for as much as this Plastic Nature, cannot act electively or with Discretion."⁵⁴ Thus plastic nature was a natural instrumental faculty that presided over the regularity and harmony of the world without being itself the origin of it and without self-consciousness.⁵⁵ It could also be understood as a "simple", incorporeal, vital energy, similar to a Platonic *anima mundi*, that unconsciously gives life to the world.⁵⁶ Thus, God is not directly involved in creating every single part of the world, but once he has instructed plastic nature, as one would a servant, he lets it act on its own, keeps watch on it and supplements that which is eventually lacking.⁵⁷ For Le Clerc's Cudworth, there are two alternatives to this plastic

50 One could argue that mechanism does not necessarily contradict the idea of an intelligently directed generation, but it seems that Descartes did not give a sufficiently clear explanation of how such mechanism worked in practice, without returning to some sort of Aristotelian substantial forms. See also PYLE, *ibid.* 199 f.

51 PYLE, *ibid.* 203.

52 Pauline PHEMISTER, *The Soul of Seeds*, in: Adrian NITA (ed.), *Leibniz's Metaphysics and Adoption of Substantial Forms. Between Continuity and Transformation*, Dordrecht 2015, 125–141, 131.

53 The total number of articles directly dedicated to the *True Intellectual System of the Universe* (or to its defence) is 13, all in *Bibliothèque choisie*: vol. 1 (1703) Art. 3; vol. 2 (1703) Art. 1 and 2; vol. 3 (1704) Art. 1; vol. 5 (1705) Art. 2 and 4; vol. 6 (1705) Art. 7; vol. 7 (1705) Art. 1; vol. 8 (1706) Art. 1 and 2; vol. 9 (1706) Art. 1, 2 and 13. Related articles are found also in vol. 6 (1705) Art. 6; vol. 7 (1705) Art. 7 and 8; vol. 9 (1706) Art. 3; vol. 10 (1706) Art. 8.

54 Ralph Cudworth, *The True Intellectual System of the Universe. The First Part: wherein all the Reason and Philosophy of Atheism is Confuted: and its Impossibility Demonstrated*, London 1678, 178.

55 *Ibid.* 179.

56 *Ibid.* 180.

57 Jean Le Clerc, *Bibliothèque choisie*, vol. 2 (1703) Art. 2, 84. The "vitalist" undertone in this concept of "plastic nature" is evident and shared by others in Cudworth's circle and be-

nature, both of them untenable. On the one hand, there is the supposition that the world is maintained by a purely mechanical and thus fortuitous process; on the other, that God interacts with the world in the formation of “chaque mouche, chaque mite, chaque ciron & chaque insecte”.⁵⁸ He contrasts a purely mechanistic world view with that of an admiring stance towards nature, in which “tous les membres renferment tant d’art, que Galien admiroit l’artifice qu’il voyoit dans un pied de mouche, & qu’il auroit encore bien plus admiré, s’il avoit eu l’usage du microscope”.⁵⁹ Also, a purely mechanistic nature did not provide a basic explanation for all the natural phenomena that we commonly see:

“Non seulement on ne sauroit concevoir que l’infinie régularité, qui est dans tout l’Univers, résulte constamment du simple mouvement de la matiere; mais il y a encore plusieurs phénomènes particuliers, qui passent le pouvoir du mouvement mécanique; comme la respiration des animaux, & il y en a même, qui sont contraires à ses loix, comme la distance du pole de l’Equateur de celui de l’Ecliptique.”⁶⁰

Thus, through the concept of plastic nature, a rational explanation of natural phenomena was secured. At the same time, the pitfall of a purely mechanical nature that renders God merely a spectator, and thus superfluous, was avoided.⁶¹ The alternative, that conceived of God as the direct author and sustaining force of every single natural part and process, was for Le Clerc’s Cudworth equally untenable, given that a perfect being would not cause any imperfection in his creation, despite such imperfections being evident. In this case, nature would also be totally passive:

“Que si l’on dit que Dieu est l’auteur immédiat de tout, c’est faire la Providence embarrassée, pleine de soins & de distractions; & par consequent en rendre la créance plus difficile qu’elle n’est & donner de l’avantage aux Athées. ... Il ne paroît pas conforme à la Raison que la Nature, considérée comme quelque chose de distinct de la Divinité, ne fasse rien de tout, Dieu faisant toutes choses immédiatement & miraculeusement; d’où il s’ensuit que tout se fait par force, ou par artifice seulement & rien par un principe interne.”⁶²

yond. Even Cudworth’s colleague at Cambridge, Henry More, had conceived of something similar, and so had Anne Conway. See Alister E. McGRATH, *A Scientific Theology*, London 2006, 101f. In the same way, Le Clerc had also presented Nehemiah Grew’s vitalism as in his *Cosmologia Sacra* in vol. 1 (Art. 6) and vol. 2 (Art. 13) of his *Bibliothèque choisie* and defended it from the critique of Bayle, alongside Cudworth’s work, for example in vol. 5 (Art. 4). A consideration of Grew’s peculiarities would be beyond the scope of the present study.

58 Le Clerc, *ibid.* vol. 2 (1703) Art. 2, 79.

59 *Ibid.* 79 f.

60 *Ibid.* 80 f.

61 *Ibid.* 81.

62 *Ibid.* 82 f.

Notable in the previous quotation is the possible implicit critique of Malebranchian occasionalism. The explanation that refers to God as the sole material author of the beauty and complexity of the world was, for Le Clerc, not only lacking in rationality, but more importantly posed a serious threat to the nature of God as a perfect being. For Le Clerc's Cudworth, then, neither alternative could be accepted as both led towards atheism. Plastic nature, as the mediator between God and the world, was a suitable explanatory tool for Le Clerc to counter mechanism and atheism by offering an alternative explanation of the generation of animals.

After these first three articles, Le Clerc published another excerpt from Cudworth in the third tome of his *Bibliothèque choisie*, in 1704, handling various questions, among which was the crucial point of the innatism of the idea of God. Bayle, however, chose to confront Le Clerc's Cudworth precisely on the concept of "plastic nature". He sought to show the counter-productive consequences of such a theory, using the generation of animals as one of the crucial stepping stones. For Bayle, blind (because unconscious of its own operation) plastic nature favoured, rather than countered, atheism. For him, the concept was a revival of scholastic "substantial forms" and ascribed a certain power to matter, independent from God:

"Rien n'est plus embarrassant pour les athées que de se trouver réduits à donner la formation des animaux, à une cause qui n'ait point l'idée de ce qu'elle fait, & qui exécute régulièrement un plan sans savoir les loix qu'elle exécute. ... si Dieu a pu donner une semblable vertu plastique, c'est une marque qu'il ne repugne point à la nature des choses qu'il y ait de tels agens, ils peuvent donc exister deux-mêmes, conclura-t-on."⁶³

If matter entails some sort of "inner power", then, God, according to Bayle, is superfluous in the process and can be discarded. For Bayle, the concept of "plastic nature" to explain the generation of animals suggested atheism, and Cartesian physics, in which movement is derived ultimately only from God but which ascribes no intelligence to matter on its own, was still a sounder way to understand the problem.⁶⁴

Le Clerc responded promptly in the fourth article of the fifth volume, in 1705, clarifying the distinction between scholastic substantial forms and plastic nature, the latter not being intrinsically united to matter, as are substantial forms, but only instrumental to its generation and maintenance.⁶⁵ In this sense, according to Le Clerc, Cudworth's theory was still very Cartesian, in that plastic nature is neither

63 Pierre Bayle, *Continuation des Pensées Diverses, Ecrites à un Docteur de Sorbonne, à l'occasion de la Comète qui parut au mois de Decembre 1680. Ou Reponse à plusieurs difficultez que Monsieur *** a proposées à l'Auteur*, vol. 1, Rotterdam 1705, 91.

64 Ibid.

65 Jean Le Clerc, *Bibliothèque choisie*, vol. 5 (1705) Art. 4, 290 f.

intelligent in itself nor conducts any sort of intelligence to matter. Matter is, as in Descartes, still deprived of intelligence. In Le Clerc's reply then, Cudworth's theory is still favourable to theism in Baylian terms, as it does not posit intelligence as contained in matter itself. Yet Cudworth's plastic nature, as in Le Clerc, includes a finalism that goes beyond Cartesian philosophy, as it ascribes instrumental but at the same time somehow intelligent/organized *working* (without self-consciousness and without its own intelligence) to an immaterial plastic nature which is "other" in regard to God and to matter.⁶⁶ In Bayle's subsequent response, however, he considered the nexus of the problem to be untouched: if plastic nature is understood as a "moral instrument", that is, not a purely passive faculty, it is impossible to conceive of it as working intelligently, but without any intelligence.⁶⁷ A faculty which is active but lacking intelligence cannot produce the regular world we see.⁶⁸ Conversely, if such a faculty does have some self-organising capacity and intelligence of its own, then nothing stops a "Stratonist"⁶⁹ from making matter self-sufficient and God superfluous.⁷⁰ Nonetheless, Cudworth's plastic nature as presented by Le Clerc is a simple, passive "physical instrument", and that leads to the further criticism, that Cudworth's theory is superfluous. Already Cartesian philosophy, as he sees it, had seen nature as a passive instrument: adding another entity (plastic nature) for the same task would be unnecessary.⁷¹ Once again, Le Clerc replied, discussing the salient point of the possibility of an *active* immaterial entity producing a *regular* work but being *unconscious* of it. His solution to the problem was simple: for him, such a plastic nature is possible because to God everything is possible. It is in the power of God to ascribe such limited capability (intelligent *working* – but unconscious of itself) to an immaterial entity, interfering when he sees fit, a concept resembling that of the vegetative soul in Chouet's philosophical teaching, as we shall see below.⁷² For him, this is well-exemplified in the way we interact with animals:

66 Ibid. 292 f.

67 Henry Basnage, *Histoire des Ouvrages des Savans*, par Monsr. B*** Docteur en Droit, Rotterdam August 1704, Art. 7, 386 f.

68 Ibid. 389.

69 The thought of Strato of Lampsacus, philosopher from the 3rd century BCE, known in the 17th century for his views on ascribing divine power to matter, was often instrumental to attacking Spinoza's philosophy, whose ideas resembled for many (for Cudworth, for example) those of the ancient Greek philosopher. See ISRAEL, *Enlightenment Contested* (n. 35) 446 f.

70 Basnage, *Histoire*, Art. 7, 390.

71 Ibid. 387 f. 390 f.

72 Jean Le Clerc, *Bibliothèque choisie*, vol. 6 (1705) Art. 7, 424 f.; Chouet, *Syntagma Physicum* 232.

“Je conçois aussi facilement qu’une Nature Plastique agit régulièrement par elle même, sous les ordres néanmoins de Dieu, qui intervient, comme il lui plait & quand il lui plait; que je conçois que les Bêtes font diverses choses régulièrement, lors que les hommes les conduisent, quoi qu’elles ne sâchent pas ce qu’elles font, ni pourquoi.”⁷³

Once again, this intelligence does not necessarily need to be contained in the instrument itself for it to be used successfully to maintain the regularity of the world:

“On ne peut pas dire qu’un bâtiment a été fait, sans art; parce que non seulement les mar-teaux, les regles, les équerres, les compas, les haches, les scies, mais encore les bras des hommes, qui se sont servis des ces outils, sont des choses destituées d’intelligence.”⁷⁴

There were further exchanges between Le Clerc and Bayle on the theory of plastic nature and some of the points addressed will be discussed below. Interestingly, Le Clerc applied Cudworth’s theory to the discussion of the generation of animals in the same year that he discussed scientific accounts of the Académie Royale des Sciences, confuting alternative explanations of the generation of animals by contemporary scientists (in the article, Denis Dodart) or philosophers, like Descartes, Leibniz and Malebranche and reiterating the key function of plastic nature. In his view, instead of considering animals (and plants) as created once and for all by God, enveloped in each other, the tenet of preformism, Cudworth’s plastic nature offered a more viable epigenetic alternative, and the generation of animals was a useful example of how to overcome the mechanist Cartesian *impasse* on the matter.⁷⁵ Animals are not aware of their generation, neither do they know why they do it, so that, for Le Clerc, a plastic nature is needed to preside over their generation:

“On ne peut pas non plus douter, qu’il n’y ait des Etres, qui agissent régulièrement & toujours de la même maniere; sans s’élever néanmoins jusqu’aux idées d’ordre & de régularité. C’est ainsi que les Bêtes s’appliquent à la propagation de leurs especes, & qu’elles ont soin de leurs petits, pendant quelque tems, avec beaucoup de régularité & d’ordre; sans savoir néanmoins qu’elles agissent régulièrement, & sans avoir aucune idée du dessein de celui qui les a faites. La cause immatérielle de l’organisation des Animaux, & des Plantes pourroit être de cet ordre, & agir nécessairement d’une certaine façon sans savoir pourquoi, ni comment; & sans pouvoir s’éloigner d’une certaine méthode, qu’elle suit toujours, en chaque espece.”⁷⁶

73 Le Clerc, *ibid.* 425.

74 *Ibid.* vol. 5 (1705) Art. 4, 299.

75 *Ibid.* vol. 7 (1705) Art. 7, 268. 278.

76 *Ibid.* 274.

In the end, Le Clerc admitted that Cudworth's theory is an *hypothèse*, and that Scripture, his principal source of truth alongside "nature", was unclear about it.⁷⁷ However, given his prolonged effort to defend it, we might well think that Cudworth's theory represented for Le Clerc a *very* "reasonable hypothesis". In any case, Bayle did not miss the opportunity of renewing his attack on Cudworth's theory, reiterating the same difficulties and favouring, in matters of animal generation, the Malebranchian hypothesis.⁷⁸

4. Feeling and thinking in animals

To speak of plastic nature as a single and unified force of nature would do only partial justice to Cudworth's theory. In his own terms, besides a single plastic nature, we find also individual plastic natures in "particular animals". This individual plastic nature is part of the "soul" of individual beings, presiding over the formation of their bodies with "the Contribution of certain other Causes not excluded".⁷⁹ This individual aspect of plastic nature is different from the sentient life of animals; it is rather more like an instinctive life devoid of self-perception,⁸⁰ closer to an Aristotelian notion of vegetative soul:

"Granted that what moves Matter Vitally, must needs do it by Some Energy of its own, distinct from Local Motion; but that there may be a simple Vital Energy, without that Duplicity which is in Synaesthesia, or clear and express Consciousness. Nevertheless that the Energy of Nature might be called a certain Drowsie, Unawakened, or Astonish'd Cogitation."⁸¹

Le Clerc made the reader aware that Cudworth's affirmation that an individual plastic nature somehow *thinks* was rather a generous use of the term, that in reality entails the same meaning as *lives*.⁸² He confirmed in a later article that plastic nature must be considered as parallel to a traditional vegetative soul and that nothing was asserted here that was explicitly rejected by Descartes. He specified that, "c'est à peu près à quoi en revient l'idée confuse des Ames Végétatives des Plantes & des Animaux, que toute l'Ecole a soutenues, & que Descartes n'a jamais bien pû réfuter".⁸³ As we have previously argued, the notion of the "vegetative

77 Ibid. 280.

78 Pierre Bayle, *Reponse aux questions d'un provincial*, vol. 3, Rotterdam 1706, 1294.

79 Cudworth, *True Intellectual System* 180.

80 Ibid. 179 f.

81 Ibid. 180.

82 Le Clerc, *Bibliothèque choisie*, vol. 2 (1703) Art. 2, 107.

83 Ibid., vol. 6 (1705) Art. 7, 424 f.

soul” suggests the influence of Chouet’s blend of Aristotelian and Cartesian philosophical teaching and thus his “filtered” Cartesianism.

For Le Clerc, the individual plastic natures of animals were not their sole living faculties. He affirmed that animals have souls that go functionally beyond plastic nature, tacitly accepting the common Aristotelian tripartition of the soul into vegetative, sensitive and rational, with plants having only the first, animals having only the first two, and the rational part reserved for man.⁸⁴ This is true also for Cudworth, who, in Le Clerc’s excerpts, used the concept “Vie Animale” as proof that matter alone cannot explain its existence, and therefore requires a principle (in this case, God) responsible for its creation.⁸⁵ This is something that goes beyond the mere generation and material organisation of matter by plastic nature, to include a broader notion of life and an immaterial sentient principle in animals, in explicit opposition to Descartes.⁸⁶ Le Clerc, once again, clearly distinguished an individual plastic nature from the sensitive soul of animals, the former being inferior to the latter due to its unconsciousness.⁸⁷

Bayle, however, in attempting a confutation of plastic nature in response to Le Clerc’s clarification on the subject, equated the vegetative plastic nature in animals’ souls with their entire living faculty. He drew the conclusion that, if there exist individual plastic natures that direct animals, then animals must have no feelings and self-consciousness, since plastic nature, by definition, lacks these attributes. Therefore it must be concluded that if the theory of individual plastic nature is applied to animal life, then animals are necessarily only machines, which, in the view of both Bayle and Le Clerc, seemed untenable.⁸⁸ Initially, Le Clerc did not fall into this trap, again distinguishing plastic nature from the sentient life of animals.⁸⁹ However, when engaging with Bayle’s argument by way of practical examples from the animal kingdom, his argumentation did not counter Bayle’s objection fully but rather reinforced Bayle’s view of plastic natures in animals. Even though animals are endowed with sentient souls, for Le Clerc they act out of an instinctive nature, which he equated functionally with Cudworth’s plastic nature:

“Je suppose, avant toutes choses, que les Bêtes ne sont point des Machines, mais qu’elles ont un principe interieur de mouvement, par lequel elles se remuent. Cela étant supposé, je demande que l’on s’imagine une paire d’Oiseaux, ou un Mâle & une Femelle qui soient en état d’avoir des petits, & qui en aient, comme on sait qu’ils en ont. Je demande après

84 As mentioned before, this is also clear from his own philosophical training by Chouet, as in Chouet, *Syntagma Physicum* 231 f.

85 Le Clerc, *Bibliothèque choisie*, vol. 7 (1705) Art. 1, 48.

86 *Ibid.* 47. 52. 56.

87 *Ibid.* vol. 2 (1703) Art. 2, 105.

88 Bayle, *Reponse*, vol. 3, 1258 f.

89 Le Clerc, *Bibliothèque choisie*, vol. 9 (1706) Art. 10, 366.

cela, qu'on me dise s'ils se conduisent par principe de connoissance, en ce qu'ils font; ou s'ils le font sans raisonnement, & par Instinct, comme on parle dans l'Ecole; c'est à dire, par un principe aveugle, mais qui les fasse agir nécessairement, en un certain ordre, qu'il ne fait pas lui même. Si l'on accorde l'Instinct, je ne vois pas pourquoi l'on nieroit les Natures Plastiques.⁹⁰

Thus, Le Clerc seemed to rule out the possibility that animals have the capacity knowingly to perform actions in an orderly and regular manner. In fact, if animals had self-consciousness of what they were doing, they would be more rational than human beings themselves!⁹¹ The comparison is striking:

“[About the actions performed by birds], qu'ils font sans instruction, & sans exercice & qu'ils executent parfaitement bien, du premier coup & sans y jamais manquer; aulieu que les hommes ne font rien que par instruction, qu'ils n'apprennent rien, sans un long tems, & sans l'exercer beaucoup, après quoi ils font souvent mal ce qu'ils ont appris avec bien de la peine.”⁹²

The perfection of animals in day-to-day execution and human imperfection in learned tasks would seem *prima facie* a good argument in favour of the full and even higher rationality of animals, something that for Le Clerc was simply absurd and that required the re-introduction of the concept of plastic nature. This forced Le Clerc to reconsider whether animals are mainly directed by blind instinct and plastic nature, and, contrary to human beings, are unable to act freely.⁹³ In Le Clerc's Cudworth, then, and as a result of the debate with Bayle, rationality is taken away from animals and returned to God, who instructs plastic nature how to do a number of tasks, without self-consciousness and knowledge of its own functioning.⁹⁴ Yet this was not to say that animals are pure machines, totally directed by plastic nature and instinct, as Le Clerc noted that animals do have *some* feeling and self-consciousness, but this was not discussed further nor integrated into the theory of plastic nature.⁹⁵ This failure to explain the matter fully left room for Bayle to renew criticism on this point, as he once again considered animals from the perspective of a purely mechanic plastic nature, reverting simultaneously to Cartesian animal-machines and occult qualities.⁹⁶

90 Ibid. 371 f.

91 Ibid. 372.

92 Ibid. 372 f.

93 Ibid. 377 f.

94 Ibid. 380 f.

95 Ibid. 382.

96 Pierre Bayle, Reponse pour Mr. Bayle a Mr. Le Clerc, au sujet du 3. & du 13. Articles du 9. Tome de la Bibliothèque choisie, in: id., Reponse aux questions d'un provincial, vol. 4, Rotterdam 1707, 33 f.; id., Reponse, vol. 3, 1259.

The relevance of this discussion between Bayle and Le Clerc becomes fully visible in its implications. Each side of the dispute on the souls of animals aimed at reinforcing or weakening a different philosophical tradition. Bayle expressed this explicitly, when he mentioned his surprise that the debate was lasting so long and suggested that Cudworth would have not gone as far as Le Clerc in defending his theory of plastic nature, after receiving his objections:

“Je croi aussi que s’il eût été au monde lors que le V. tome de la Bibliothèque choisie fut porté en Angleterre, il eût été bien surpris qu’on s’intéressât à sa gloire avec si peu de nécessité. L’observation de Mr. Bayle concernoit autant Thomas d’Aquin, Scot, & tels autres genies superieurs, que Mr. Cudworth, & que Mr. Grew. Nous n’avons pas ouï dire que ce dernier s’en soit mis en peine, quoi que Mr. Le Clerc l’y eût excité en quelque façon. Mr. Cudworth n’auroit pas eu moins d’indifference pour une objection à quoi il n’avoit pas plus de part que presque tout le genre humain, & il eût soupçonné sans doute qu’il ne servoit que de prétexte pour les premières semences d’une querelle.”⁹⁷

For Bayle, his confutation of Cudworth’s plastic nature served the ultimate purpose of showing the weakness of the scholastic tradition, particularly because he believed that plastic nature and scholastic substantial forms were not really different.⁹⁸ As early as 1697, he had discussed this in his *Dictionnaire historique et critique*, in the entry on “Rorarius”, to which he referred in his discussions with Le Clerc. There, he admitted the difficulties encountered by Cartesianism in denying animal souls, while still finding himself unable to accept the Aristotelian dictum that animals are sentient but not rational, which had pernicious implications for religion. If, in fact, animals are sentient and not merely machines, they also suffer, but their suffering is inexplicable if they are not fully rational and capable of sin, since sin is the cause of suffering. In that sense, pure Cartesianism was still more useful in preserving some coherence in religion.⁹⁹ Bayle and Le Clerc, then, differed in that Bayle considered Cartesianism to be more secure than traditional scholastic theories on the souls of animals in defending “true faith”. We should not forget that Bayle, too, had attended Chouet’s philosophy courses in Geneva.¹⁰⁰ Yet Bayle also moved away from Cartesianism, in assuming a soul in plants, animals and human beings, with this soul being uniform in substance and potency, but its rationality being expressed differently due to their differing organs, which curtail rational expression in plants and animals.¹⁰¹ Conversely, for Le Clerc, the traditional tripartite soul is still considered as a sound theory and plastic nature

97 Ibid., vol. 4, 35 f.

98 Ibid. 38; id., Continuation 91.

99 Id., Art. Rorarius, in: id., Dictionnaire (n. 24) 956–958 note C.

100 Ibid. 957 main body.

101 Ibid. 961 note D; id., Art. Pereira, in: ibid. 784–787 note E; id., Réponse, vol. 3, 1248 f.

is used as a way to bring traditional philosophy up to date and integrate it with current scientific knowledge.¹⁰²

To sum up: neither Le Clerc nor Bayle conceived of animals as pure machines, but they differed diametrically on how to understand the animal soul, as a result of the differing philosophical traditions from which they drew their beliefs. Le Clerc maintained a traditional Aristotelian bipartite soul (sensitive and vegetative – for animals), while Bayle resorted to a kind of general Cartesian dualism, although he also saw the soul as one and the same for all living things, with the expression of their rationality dependant on their differing organic structure. It is still not clear, however, whether this soul was understood by Le Clerc's Cudworth as material or immaterial (material meaning being extended, divisible, impenetrable – immaterial the converse). This question will be discussed in the next section. Read as a critique of mechanism, the immateriality of the soul was a central tenet in Le Clerc's presentation of Cudworth's treatise, a point to which he referred repeatedly in numerous extracts. What is at stake was the necessity of something beyond pure mechanism and pure matter, that is, of an immaterial principle, which countered atheism by proving the necessity of a creator God.¹⁰³

5. The immateriality of the animal soul, or whether or not there is a paradise for animals

In passages where Le Clerc's Cudworth deals with the problem of the immateriality of the souls of animals, the presence of an immaterial living faculty in animals was not always clearly stated. The biological life of animals was said to be "un pur accident",¹⁰⁴ although this biological *life* of animals is not the same as the living *principle* of the animal life: the latter is intrinsically an immaterial substance.¹⁰⁵ The very notion of an individual plastic nature (by definition immaterial) that is equated with the vegetative soul in animals, proves that the souls of animals are immaterial in Cudworth's sense. Yet, in another place, when speaking about the indivisibility of the soul – an attribute of immateriality – as one of its essential principles, Le Clerc's Cudworth applied this only to God and the human soul.¹⁰⁶

Returning to the first extract from Cudworth, Le Clerc had stressed the immateriality of the soul, radically distinct from matter in its active principle, while matter is inert.¹⁰⁷ He followed Cudworth in affirming that belief in the possibility

102 Le Clerc, *Bibliothèque choisie*, vol. 6 (1705) Art. 7, 425; vol. 7 (1705) Art. 7, 277.

103 *Ibid.*, vol. 9 (1706) Art. 1, 22 f.

104 *Ibid.*, vol. 8 (1706) Art. 1, 41.

105 *Ibid.*

106 *Ibid.*, Art. 2, 49.

107 *Ibid.*, vol. 1 (1703) Art. 3, 98.

of the existence of immaterial substance was shared by ancient philosophers, for example by Aristotle, and in linking this with the idea that God as a substance is clearly distinct from matter.¹⁰⁸ In a later excerpt, Le Clerc specifically contrasted the properties of material and immaterial substances:

“Il faut montrer, comme il l’a fait encore, que les propriétés, & les actions des Natures intelligentes n’ont rien de commun avec ce que nous connoissons dans les Corps; de sorte que nous ne pouvons pas dire que les Natures intelligentes sont corporelles, sans avancer une chose très-absurde; si par corporel nous entendons ce que l’on entend ordinairement par ce mot, ou l’assemblage de certaines propriétés, qui nous sont connues; savoir, l’étendue, la solidité, la divisibilité, la mobilité, & ce qui fait que le Corps est susceptible de diverses figures. Nous ne voyons rien de semblable, dans les Esprits, & nous ne pouvons pas dire que ces propriétés soient en Dieu, de la même manière, qu’elles sont dans les Corps. Par là on peut confondre les Materialistes, qui ne sauroient prouver qu’un Corps soit capable d’intelligence; sans s’engager dans l’explication du sujet inconnu, dans lequel les propriétés intelligibles de Dieu existent.”¹⁰⁹

Here, however, Le Clerc offered an explicit critique of Cudworth’s argument. Cudworth had proved immateriality through the penetrability and indivisibility of extended space, as distinct from bodies, thus making the existence of a living immaterial and intelligent substance a logical necessity.¹¹⁰ Le Clerc thought that the inference of an *intelligent* and *living* immaterial substance from the existence of a vaguely extended immaterial substance was unwarranted.¹¹¹ As the above quotation shows, for him immateriality was proved through the difference in the properties of the two substances themselves. In a later passage, it was Le Clerc’s Cudworth who clearly exposed the difference between material and immaterial substance in their essential properties, which make them radically different.¹¹² Finally, Cudworth, embracing Plotinus’s doctrine, showed that this substantial distinction finds a parallel in the immaterial soul and material body of human beings *and animals*:

“La conclusion de ce raisonnement est, que dans les Hommes & dans les Bêtes, il n’y a qu’une seule chose indivisible; qui est présente à tout leurs corps, & qui s’apperçoit de tout ce qui se passe dans ses parties; par quelque sens que les objets entrent. Cette même chose est unie aux membres les plus éloignez, sent ce qu’ils souffrent, & agit toute entière en tous.

108 Ibid. 126 f.

109 Ibid., vol. 8 (1706) Art. 1, 21.

110 Ibid. 11–19.

111 Ibid. 19 f.

112 Ibid., Art. 2, 47.

C'est là le MOI, qui est en chaque homme, & non la masse étendue de son corps, qui est composée de plusieurs Substances distinctes."¹¹³

Thus, the soul was considered by Cudworth an immaterial unifying principle in human beings as well as in animals and Le Clerc would confirm this argument as being based "par des raisonnemens très-profonds & très-justes".¹¹⁴ In a later excerpt, however, after having examined the connection between the soul and the body, Le Clerc would maintain the immateriality of the souls of animals as a reasonable way of avoiding a mechanistic conception of them. But he also expressed his disappointment at not being able to solve, through the immateriality of the animal soul, all the related difficulties. He simultaneously expressed slight scepticism regarding the immaterial *origin* of animal life, and thus its immateriality:

"Il n'y a que ce qu'il dit de l'Ame des Bêtes, qui puisse faire quelque peine. Mais à moins de soutenir que ce sont de pures machines, ce que presque personne ne croit; il en faut venir à dire que les Ames des Bêtes sont produites à part, & peuvent subsister, sans leurs corps. Quand on considère le nombre prodigieux d'animaux de toutes sortes & d'insectes, qui se meuvent de toutes parts, dans l'eau & sur la surface de la terre & dont la plupart ne vivent que très-peu de tems; il paroît d'abord dur à l'imagination d'avouër qu'il y a dans tout cela des principes de vie & de mouvement, qui ne sont nullement sortis de la Matière & qui n'y retournent pas. Il est fâcheux de se voir dans l'embarras de ne savoir presque que répondre, sur l'origine & sur le sort de ces Ames, sans s'engager en de grandes difficultez."¹¹⁵

Finally, he appealed to Locke's argument *ad ignorantiam*, that is, that we cannot rationally know the substances of which matter and soul are made,¹¹⁶ and he compared our ignorance of many aspects of the immateriality of animal souls with the certainty with which Cartesians maintained animal machines. This certainty results from a lack of awareness of the limited explicative power of their own ar-

113 Ibid. 91.

114 Ibid. 93.

115 Ibid., vol. 9 (1706) Art. 1, 37 f.

116 Locke conceived of the soul as made of a very thin matter, responsible for the life of the body, and mortal, and he distinguished it from the spirit, to which he attributed immateriality and immortality and which is given only by God. See Mario SINA (ed.), *Testi documentati. Testi teologico-filosofici lockiani dal ms. Locke c. 27 della Lovelace Collection*, Milan 1972, 403 f. Le Clerc's doubt here might have been influenced by Locke's conception. Le Clerc was well aware of Locke's thought, as is evident from his early review of Locke's *Essay concerning Human Understanding* (Le Clerc, *ibid.*, vol. 8 [1706] Art. 2, 85) and subsequent excerpts from it, and his continuous correspondence with him. On the other hand, Le Clerc's philosophical Cartesian training did derive this lesson from Chouet, so it seems more likely that Le Clerc was simply hesitant about giving up orthodox Cartesianism. For the latter point, see Jean-Robert Chouet, *Tractatus de rebus viventibus*, ed. by Elena RAPETTI, in: SINA/BALLARDINI/RAPETTI, Chouet (n. 48) 281 f.

guments; in Le Clerc's view, this is something that should ideally lead to an honest "nescio".¹¹⁷

Crucially, Le Clerc was disturbed not by the conception of an immaterial substance in animals, which follows logically from the reasoning presented, but by its theological-philosophical consequences. If, in fact, the souls of animals are immaterial, then they cannot be produced from matter and must thus be continuously created for each animal, nor can they subsequently perish after death. The question of immateriality is thus closely linked with the question on the origin and mortality of the soul of animals. Bayle had already seen this point clearly in his *Dictionnaire*, where he made immateriality and immortality interdependent, so that if the soul of an animal is immaterial, then it must also be immortal – something that was widely rejected – without any possibility of distinction between the human and the animal soul.¹¹⁸

Bayle was critical of what he saw as an only imaginary distinction between the two in Daniel Sennert's (1572–1637) solution.¹¹⁹ The latter believed that immortality was a consequence of the will of God, who, like a king minting coins, had created some coins to last forever and some to last only until a new order came.¹²⁰ Sennert's solution was proposed by Le Clerc's Cudworth, where immortality is ascribed to the good will of God, who attaches it to the human soul in order to give it moral responsibility and freedom, but not out of necessity.¹²¹ Le Clerc held this conventional solution, even though it would have been more Cartesian to consider immateriality and immortality to be interdependent, as Bayle had done.¹²² The reference to God as the guarantor of immortality had been entailed in Chouet's teaching, and in confirming this Le Clerc found an ally in Cudworth.¹²³

117 Le Clerc, *ibid.*, vol. 9 (1706) Art. 1, 38 f.

118 Bayle, Art. Sennert, in: *Dictionnaire* (n. 24) 1041 note D; *id.*, Art. Rorarius, in: *ibid.* 961 note E. See also *id.*, *Reponse aux questions d'un provincial*, vol. 1, Rotterdam 1704, 197.

119 Daniel Sennert was a professor of medicine at Wittemberg, well known at that time, among other things, for being one of the forerunners of early modern atomism and, most importantly, for holding the traducianist doctrine of the soul, that animal and human generation proceeds from seeds and the soul is thereby transmitted from parent to offspring. The latter theory caused particular controversy, as it seemed to provide reasons for considering animal souls immortal like human souls. See Richard T. W. ARTHUR, *Animal Generation and Substance in Sennert and Leibniz*, in: SMITH, *Animal Generation* (n. 47) 150–155; Emily MICHAEL, *Daniel Sennert on Matter and Form. At the Juncture of the Old and the New*, in: *Early Science and Medicine* 2 (1997) 272–299.

120 Bayle, Art. Sennert, in: *Dictionnaire* (n. 24) 1043 note E.

121 Le Clerc, *Bibliothèque choisie*, vol. 1 (1703) Art. 3, 115.

122 *Ibid.*, vol. 9 (1706) Art. 1, 27.

123 Chouet, *Syntagma Physicum* 239. The other argument used by Chouet to prove this was that, since death comes from divisibility of matter, the simplicity of soul (not being composed of pieces) makes it indivisible and thus immortal. For the latter arguments, see *ibid.*

In Cudworth, Le Clerc found a number of other alternatives that overcame the problem of human beings and animals sharing the same kind of immaterial substance and therefore the necessity of consigning animals to heaven or hell. Drawing upon ancient philosophers, Le Clerc's Cudworth pondered both the mortality and immortality of the souls of animals and found ancient arguments showing that animal immortality could be of a different nature from human immortality. A first option would be to assume that the animal soul is only "temporarily" dead, in the sense that, being detached from the body after the death of the animal, it remains without sensation – the preeminent activity of the (immaterial) sensitive soul of animals – for a time, until it regains its connection to the old or a new body (of another animal) and starts gaining new sensations and thus living again:

“Qu'encore que l'intellection soit une action de l'Âme raisonnable, sans que le Corps y concoure; néanmoins la sensation ne se fait pas, sans son intervention. C'est pourquoi les Ames des Bêtes peuvent demeurer, après la mort de leurs Corps, sans sentir & sans agir. ... il y a peu de lieu de douter que l'Âme Sensitive de certains Animaux, qui sont comme morts & assoupis pendant tout l'hiver, & qui ne se réveillent que quand la chaleur revient, ne demeurent alors sans sentiment & sans action. Ainsi quoi que l'on puisse dire, en un sens, que les Ames des Bêtes sont immortelles, par ce que leur substance, & les principes de la vie subsistent en elles; néanmoins on peut les appeler mortelles à un autre égard, parce qu'elles demeurent quelque tems, sans jouir de cette vie. Il paroît par là qu'on n'a pas sujet d'inférer de la subsistence des Ames des Bêtes, après la mort de leurs Corps, qu'il faut nécessairement qu'elles aillent en Paradis, ou en Enfer.”¹²⁴

This option considers animal immortality only insofar as it is connected to or separated from a body, thus making the animal soul both, in a sense, mortal and immortal at the same time. Another option considers the animal soul as truly mortal, but this is inconsistent with the fact that, being immaterial, the soul of an animal cannot by nature be mortal and therefore cannot die. The animal soul can, nonetheless, be destroyed or reabsorbed by God, with the implication that an afterlife in heaven or hell is unnecessary. This also applies to human beings, as we saw above: if the justice of God did not guarantee them immortality in heaven or hell, as a consequence of their moral freedom to choose virtue or vice, neither heaven nor hell would be prepared for them.¹²⁵ A final option is the existence of a sort of “aerial body”, which serves as a temporary envelope for the souls of animals (and human beings) before they are united to a “corps plus grossier” and after their separation from it.¹²⁶ This is not too difficult to imagine, if we consider our daily experience of the worm that is turned into a “new” body, that of the but-

124 Le Clerc, *Bibliothèque choisie*, vol. 9 (1706) Art. 1, 30–32.

125 *Ibid.* 32 f.

126 *Ibid.* 29.

terfly, an image found in contemporaneous Christian theology with reference to the resurrection.¹²⁷ Thus, Cudworth offered Le Clerc an array of ways with which to overcome pitfalls related to the immateriality of the animal soul, thus countering materialism and atheism, as well as the related problem of animal immortality, which had led Descartes to embrace a mechanist view of animals.¹²⁸ Cudworth assisted Le Clerc, then, in bringing relevant philosophical-theological problems to the fore and thus engaging as “quelque habile homme” in Continental Europe “à traiter ce sujet, plus à fonds”.¹²⁹

6. Body and soul connection

To counter all of the atheistic-materialistic objections to the immateriality of the soul, a problem crucial to both Cudworth and Le Clerc’s thinking, it was essential to consider the link between the body and the soul. This difficulty had already preoccupied Descartes in his formulation of the dichotomy of the body and mind. More particularly, the objection that Cudworth faced was how an extended substance, the body, is connected to a non-extended substance, the soul. If a substance is not extended, it cannot be considered as being in a particular place or body, neither can it be understood how it can act on a particular body, thus weakening the reasons for the very existence of such an immaterial substance.¹³⁰ Bayle’s own formulation of the problem, applied to animals, is particularly pointed:

“Quand on ne feroit que vous demander si l’ame d’une bête existe dans le corps de cette bête, on vous tailleroit bien de la besogne ... Si vous repondiez qu’elle n’existe ni dans le corps de cette bête, ni dans aucun autre lieu, vous trouveriez peu de gens qui daignassent vous écouter, & vous parleriez sans rien comprendre dans vôtre dogme. Si vous repondiez qu’elle existe dans le corps de cette bête, l’on en concluroit qu’elle est étenduë, & par conséquent materielle; ce qui vous feroit tomber en contradiction.”¹³¹

Cudworth challenged this objection by drawing on the arguments of Platonists and Pythagoreans. The soul in reality is not attached directly to the material body, but there is an “aerial body”, in which the soul is enveloped and which lasts after the separation from the material body, from the “corps grossier”.¹³² Others had even postulated a further layer, that is an “ethereal” or spiritual body, even “finer”

127 Ibid. 32.

128 Ibid. 27.

129 Ibid. *Avertissement*.

130 Ibid., vol. 8 (1706) Art. 2, 45.

131 Bayle, *Reponse*, vol. 4, 212.

132 Le Clerc, *Bibliothèque choisie*, vol. 8 (1706) Art. 2, 51.

than the aerial body and more rational.¹³³ Cudworth went beyond philosophy, resorting to Scripture and the Church Fathers, noting that St. Paul had distinguished between an animal, or mortal, body and a spiritual or celestial body,¹³⁴ and that Origen had affirmed that only God is totally without a body and that all souls, even angels, are attached to a body of some kind.¹³⁵ This would solve the problem raised by materialists because the soul, being contained in the subtler body which is attached to the material body, would move with the body, thus allowing the body and soul to influence each other.¹³⁶

Le Clerc initially welcomed this solution, as it potentially led to a better understanding of the Pauline epistles and the Church Fathers when speaking of the distinction between the animal and the spiritual body.¹³⁷ When discussing its effectiveness in confronting the objections of atheists, however, he was highly critical of this solution and ultimately considered it untenable. Crucially, whatever the container of the soul is, be it spiritual or “aerial”, it is always a “body”, that is, composed of a material substance. Even if this materiality is “subtle”, and despite the “thinness” of such a body, it is still distinctively material and thus not reconcilable with the immaterial soul:

“Ces mêmes gens-là [the ‘Materialistes’] demanderont, comment une chose absolument immatérielle, comme l’Ame, peut être unie à un corps matériel; car enfin quelque subtil que puisse être le véhicule étherien, que les Platoniciens lui donnent, c’est néanmoins un corps, qui n’a pas plus de rapport avec une Nature Immatérielle, que les corps les plus grossiers.”¹³⁸

Thus, for Le Clerc, the problem of the connection between the mind and the body was not solved by simply postulating a finer body as a medium of connection. He would reaffirm even more strongly that it is the radical and irreconcilable difference between mind and body that is problematic:

“Les preuves, dont on se sert pour prouver qu’il y a des Êtres immatériels, & dont les propriétés n’ont rien de commun avec celles des Corps, sont incontestables, & l’on en est convaincu, dès qu’on les comprend. Mais en démontrant la grande différence des Êtres, qui pensent, & de ceux qui sont étendus; on augmente la difficulté qu’il y a à concevoir comment ces deux sortes d’Êtres sont unis ensemble, comme nous le voyons. Comment est-il possible que des Êtres, qui n’ont rien de commun, soient, selon les idées de ceux qui admettent le Véhicule de l’Ame, naturellement unis ensemble? Comment une simple pensée peut-elle produire du mouvement, dans la Matière de nos Corps; soit que l’on entende celle

133 Ibid. 52f.

134 Ibid. 69f. Cf. 1 Cor. 15:44 (Le Clerc erroneously refers to verse 48).

135 Le Clerc, *ibid.* 75–79. Cf. Origen, *princ.* I 6,4 (GCS Orig. 5, 85).

136 Le Clerc, *ibid.* 58.

137 Ibid. 59.

138 Ibid. 60.

du Véhicule, ou celle du corps grossier; & comment une Matière émuë, de quelque maniere que l'on conçoive ce mouvement, peut-elle faire naître des pensées dans nôtre Esprit?"¹³⁹

For Le Clerc, such questioning resulted in a humble attitude towards reality and the confession that we don't know how body and mind are connected. He added that we will *never* be able to solve this mystery: "Il y a des liaisons secretes entre les Sujets cachez, des proprietéz des Esprits & des Corps, que nous ne pénétrons jamais, en cette Vie; & peut-être que des Substances, qui nous sont tout à fait inconnues, interviennent dans cette union, sans que nous le sâchions."¹⁴⁰ Nonetheless, we would misunderstand Le Clerc's thought if we concluded that he doubted the mutual influence of body and soul. As in strict Cartesianism, the fact that our experience teaches us that body and soul *are* connected, was, for Le Clerc, sufficient assurance that they are.¹⁴¹

Here, Le Clerc's use of Cudworth was somewhat critical. Cudworth was still considered a good source of possible solutions to atheistic and materialistic arguments,¹⁴² and, perhaps even more importantly, Cudworth's suggestions provided the occasion for discussing various hypotheses and for rejecting the greatest contemporary Cartesian alternative for the union of the soul and the body – occasionalism. For Le Clerc, occasionalism lacked explanatory power on the interaction between mind and body. As a theory, occasionalism diminished God's worth by positing his continuous meddling, even in the smallest things. Also, it seemed irrational that God had created such a complex body pointlessly, for he

139 Ibid. 103 f.

140 Ibid. 105.

141 Ibid., vol. 9 (1706) Art. 10, 367; vol. 10 (1706) Art. 8, 390 f. The theory of the "aerial body" would hardly have found a place in Le Clerc's consideration of the so called body-mind problem. Not only had his teacher, Chouet, taught that we don't know how mind and body are united, even if we are assured that they are by our personal experience, but Le Clerc's own philosophical teaching is also permeated by a negative attitude towards the solution of such a problem. In reality, and this follows his friend Locke – to whom the first and second editions of his *Opera Philosophica* are dedicated and to whom he refers in multiple passages in a later discussion on the subject – very closely, the greatest difficulty lies in the fact that we know only the properties of the two substances, matter and spirit, not the substances as such. For Le Clerc, the question remains obscure, as we do not even know if we are discussing two separated substances or if these substances are unified by God. Even Cudworth's theory of plastic nature, expressly cited in the 1704 edition of Le Clerc's *Opera Philosophica* as a possible mediating element between body and soul, lacks explanatory power in this case, since it fails to explain how an immaterial plastic nature could interact with a material world.

142 The theory of the "aerial body" is not rejected *in toto* by Le Clerc but considered cautiously. In his view, the Church Fathers have misunderstood Scripture and taken the concept of the spiritual body from pagan philosophy: *ibid.*, vol. 8 (1706) Art. 2, 79.

would still need to be responsible for every action.¹⁴³ In his *Opera Philosophica*, Le Clerc had branded occasionalism as pure conjecture, to which he preferred the humble attitude of the Aristotelians, who said that the force of movement comes ultimately from God, even if we don't know how this actually happens.¹⁴⁴ His renewed confutation of occasionalism in the *Bibliothèque choisie* was also a response to Bayle's objections to plastic nature and the latter's affirmation of occasionalism as the best way to counter atheism.¹⁴⁵ Bayle had shown the problems inherent in the theory of plastic nature, as we have seen above, and thus saw occasionalism as the best alternative.¹⁴⁶

With his fourth volume of the *Reponse*, Bayle had moved the conversation from the problem of the interrelation between body and soul, between materiality and immateriality, to a discussion of the concept of extension. Bayle held Descartes's position on the correspondence of extension and matter: immateriality had to be completely without extension, or else we could say that an immaterial God, who is omnipresent, is extended and thus material, a conclusion dangerously close to Spinozism.¹⁴⁷ Descartes had also implicitly suggested that immaterial spirits, including God, cannot be in any particular place or connected to a particular body.¹⁴⁸ For this reason, Bayle had criticised Locke's *Essay concerning Human Understanding*, especially his concept of solidity, which allowed extension to be understood as solid-material-impenetrable space and at the same time as a neither material, nor immaterial, space, akin to a vacuum.¹⁴⁹ Bayle had turned Locke's acknowledgment of the inner unknowability of the substances against him by saying that such an argument would not prevent making materiality think and immateriality to be extended, thus leading to all sorts of problems.¹⁵⁰ Bayle concluded:

“Combien seroit-il Plus avantageux à la Religion de s'en tenir au principe des Cartesiens que l'étenduë, & la matiere ne sont qu'une seule & même substance! Si l'on nous menoit à

143 Ibid. 104. Cf. *ibid.*, vol. 7 (1705) Art. 7, where Le Clerc does not provide any particular reason to reject occasionalism.

144 Joannis Clerici Pneumatologia, Cui subiecta est Thomae Stanleii philosophia orientalis. Operum philosophicorum Tomus II. Editio Tertia auctior & emendatior, Amsterdam 1704, sect. I, ch. 6, par. 12–14.

145 Basnage, *Histoire*, Art. 12, 543 f. See also *ibid.*, Art. 7, 395.

146 See above section 3.

147 Bayle, *Reponse*, vol. 4, 216 f. See also *ibid.*, vol. 1, 210–213; COLIE, *Light and Enlightenment* (n. 9) 122 f.

148 Bayle, *ibid.*, vol. 4, 217 f.

149 A clear definition of this can be found in Locke's second letter to Stillingfleet: John Locke, Mr. Locke's Reply to the Bishop of Worcester's Answer to his second Letter, in: *The Works of John Locke*, vol. 3, London ¹⁷1824, 418.

150 Bayle, *Reponse*, vol. 4, 219–223.

quelques chose de clair en abandonnant ce principe bien des gens prendroient patience, mais on nous jette dans des tenebres d'autant plus obscures."¹⁵¹

In Bayle's view, then, Cartesian physics still had more advantages than an "obscure" consideration of extension. In the eighth volume of the *Bibliothèque choisie*, Le Clerc's Cudworth had discussed the concept of extension in order to confute the objection of atheist-materialists – who asserted that nothing exists but matter – by affirming the logical necessity of an extended, penetrable and indivisible, but also living and intelligent, space. For Cudworth, the concept of space without matter, that is of void, was something that went beyond the material, "real" world and that led into the immaterial, a kind of "immaterial void". Not so for Le Clerc, who criticized the lack of solid reasoning in this passage. Cudworth had moved from the concept of void to one of an immaterial substance, drawing from it the concept of "life" and "intelligence", without warrant.¹⁵² Like Locke, Le Clerc considered extension to be composed of a material part and a "pure extension" – that is, a void – part.¹⁵³ This "pure extension" was for Le Clerc neither material, nor immaterial:

"Itaque omnibus expensis, cùm sentiamus obversari nobis ideam Spatii sine soliditate, quamvis soliditas, sine spatio non sit, agnoscamus necesse est esse Ens quod sit extensum, sine soliditate; quod neque corpus sit, neque spiritus, prout eae voces intelliguntur ab omnibus; & quod omnia corpora ambitu suo contineat. Est hujus Entis idea simplicissima, cum nihil praeter puram Extensionem in eo intelligamus, nec proinde ullam requirit definitionem. Eam ideam sensibus & animi mediatione haurimus, cùm omissâ omni soliditatis consideratione de Spatio cogitamus, aut distantiam quampiam consideramus, quam corpore occupari aut ignoramus, aut non cogitamus."¹⁵⁴

Thus, in what seems a Gassendian revision of Cartesian extension, Le Clerc was again critical of Cudworth. To Bayle's attack on Locke's concept of extension, Le Clerc, after having said that the whole of Bayle's philosophical knowledge "consistoient en quelque peu de Péripatetisme, qu'il avoit appris des Jesuites de Toulouse, & un peu de Cartesianisme, qu'il n'avoit jamais approfondi",¹⁵⁵ would reply with a reference to the scholastic distinction of "predicamental accidents". The accidents of matter, in particular "extension" (a predicamental accident), are known, even though the substance itself, in Locke's view, is not. In this way, Le Clerc avoided

151 Ibid. 224.

152 Le Clerc, *Bibliothèque choisie*, vol. 8 (1706) Art. 1, 20.

153 Joannis Clerici *Physica, Sive de Rebus Corporeis Libri II Posteriores. Operum Philosophicorum Tomus IV. Editio Tertia auctior & accuratior*, Amsterdam 1704, lib. V, ch. 2, par. 2–9.

154 Ibid., par. 11.

155 *Bibliothèque choisie*, vol. 12 (1707) Art. 2, 106.

scepticism.¹⁵⁶ His reply to Bayle was also a reaffirmation of his own conviction of the limit of the *a priori* approach of Cartesianism to physics: “C’est que les Cartesiens étoient bien éloignez de leur compte, lors qu’ils s’étoient imaginez de pouvoir rendre raison de tout, & même à priori, par leurs principes.”¹⁵⁷ And in a later passage: “Ceux qui ne connoissoient que le dehors des choses tâchoient de persuader le monde, que par les principes de la Physique de Descartes, on pouvoit rendre raison de tout; quoi qu’elle n’ait aucuns principes généraux & assùrez, qui nous découvrent clairement quelle est la nature du Corps.”¹⁵⁸ Le Clerc would also ultimately contradict Bayle on the usefulness of Cartesian physics for countering atheism. He referred to Bayle’s *Continuation*, chapter CXIV, where Bayle had shown that, through Cartesianism, God could be made a voluntarist, able to create even paradox at will, and that this would help missionaries in their quarrels with Chinese philosophers.¹⁵⁹ Such a conclusion, was not only contradictory in Le Clerc’s terms, but also in Bayle’s and Locke’s, as all of these thinkers conceived of God as somehow limited by paradox.¹⁶⁰ But such a critique of the usefulness of Cartesianism for the defence of the Christian religion did not target the concept of Cartesian extension, even though Le Clerc had cited it here for this purpose. Once again, Le Clerc’s excerpt from Cudworth presented an opportunity for Le Clerc both to draw support for his own assumptions and to discuss various philosophical problems, in this case related to the contemporaneous understanding of physics.

7. Conclusion

The present review of those passages in Le Clerc’s excerpts from Cudworth’s *True Intellectual System of the Universe* which have a particular connection with natural philosophy has highlighted some of the ways in which Cambridge Platonism, through Cudworth, was presented to Continental Europeans in the early modern period. One of the most obvious ways in which Le Clerc presented Cudworth’s thought was as an excellent argumentative “toolbox” against atheism and materialism. Cudworth’s “plastic nature” is the main concept used by Le Clerc in a number of discussions related to the generation of animals and their internal living faculty. It is also the idea most contested by Le Clerc’s opponent, Bayle. Granted, such a concept was also part of the heated debate on divine providence, on the problem of evil, and on the rationality of religion between Le Clerc and

156 Ibid. 112.

157 Ibid. 113.

158 Ibid. 117.

159 Ibid. 115.

160 See e.g. *ibid.* 120 f.; Bayle, *Reponse*, vol. 1, 214; Locke, *Locke’s Reply* 465.

Bayle, although that has been neglected in the present article because it has already been the object of detailed study.¹⁶¹ However, it is also evident that the concept of plastic nature, if applied to the natural sciences, in particular to biology, has a relevance of its own that goes beyond its theological implications. Natural scientific observations became an obstacle with which plastic nature had to be confronted, in order to grasp the functioning of the world better. We could say with Douglas Hedley, that in Cudworth, “God is brought into physics, and physics is used to provide a quasi-inductive and experimental demonstration of the existence and attributes of God”.¹⁶² But the philosophical debate on the natural sciences remained important in itself, even though theological-philosophical implications were very present to the minds of the disputants.

Le Clerc did not use Cudworth’s thought simply as a support for his own ideas or to serve as an argumentative *repertoire*. This was surely the case in many instances, but elsewhere Cudworth’s ideas were criticized as a *non sequitur*, as in the case of the demonstration of the existence of immateriality from the concept of extension. In other cases, the limits of Cudworth’s hypotheses were made evident, as with the theory of the aerial body of the soul, which for Le Clerc did not solve the problem of how body and soul are connected. In other circumstances, as in the case of the immortality of the souls of animals, Cudworth’s hypothesis was considered a good point of departure for further discussion among specialists. Generally, Le Clerc’s use of Cudworth can also be considered as a critique of some aspects of Platonism and Cartesianism. This sometimes took the form of an open rejection of Cartesianism, as in the case of the nature of extended matter, which Le Clerc used as a critique of Cartesian physics and methodological *apriorism*. As can be clearly seen in his excerpts from Cudworth, Le Clerc argued for a more Lockean *a posteriori* attitude and an awareness of the unknowability of the substance of the material and the immaterial. Similarly, he rejected Malebranchian occasionalism and departed from Cartesianism in decoupling immateriality from immortality.

At the beginning of this paper, I remarked on the strict interrelation of natural philosophy with the debate on freedom in Cudworth’s thought, which is part of his Origenian framework.¹⁶³ I would affirm that through Cudworth’s multi-faceted anti-determinism the groundwork for his Origenian understanding of freedom is laid. In this sense, Le Clerc’s excerpts were an interesting and relevant contribution to the spread of such an outlook in Continental Europe. That a discussion of natural philosophy in Continental Europe was also relevant in establishing, in Cudworth’s sense, a libertarian freedom, is apparent from the debate between

161 KORS, *Naturalism* (n. 15) 229–259.

162 HEDLEY, *Cudworth on Freedom* (n. 32) 52.

163 Cf. *ibid.* 53.

Le Clerc and Bayle on divine providence and the problem of evil, which we have barely sketched here. In conclusion, Le Clerc's excerpts from Cudworth's *True Intellectual System* must be considered as a crucial aspect of Cambridge Platonism's presence in Continental Europe.