Natural history and the medicine of the mind: the roots of Francis Bacon`s *Great Instauration*

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Francis Bacon founded his grand-scale project of a Great Instauration on what he has claimed to be a new and reformed natural history. This claim has been often taken for granted by Baconian scholars. This paper investigates some possible roots of Baconian natural history and discusses a number of features common to Bacon’s conception of natural history and to other natural historical writings belonging to the same cultural context: the Neo-Stoic and Protestant revival of late sixteenth-century and early seventeenth-century England. My investigation focuses on one of the characteristic features Baconian natural history shares with other natural historical writings belonging to this cultural milieu, namely the claim that an empirical study of nature has moral and therapeutic benefits for the human mind.

Keywords: natural history, medicine of the mind, Francis Bacon, Pierre de la Primaudaye, Simon Goulart, Seneca.

1. Preliminaries: Bacon’s Project

Francis Bacon’s project of the Great Instauration aimed both at a reformation of the received knowledge and at a general reformation of the practitioners of this novel philosophy. This grand scale project was to be achieved by putting together two intellectual disciplines: natural history and natural philosophy. More precisely, Bacon urged the students of nature to start building the foundations of the new philosophy, namely a comprehensive natural history, a storehouse of facts and data gathered together for the future common use of many generations. On this foundation, the philosopher would first impose an ordering system, allowing classifications and first order generalizations. Natural history properly digested into ‘tables of discovery’
would then be the material of *inductio*: the procedure of extracting axioms of increasing generalization and putting them to work in the interpretation of nature. The whole procedure is notoriously difficult and was subject of various interpretations, simplifications and misconceptions in the past 300 years.

One of the most obvious difficulties in Bacon’s plan is epistemological. For Bacon, the human mind is fundamentally flawed and distorted, so much so that it cannot record genuine facts of nature. The mind ‘brings its own idols’ and applies them to the interpretation of nature. The intellect is “unequal to cope with the subtlety of things”.\(^2\) Even if (some of) the natural history is gathered together, the process cannot take off mainly because the art of classifying facts and extracting axioms is highly obscure and probably unfinished\(^3\). Or, at least, it is exposed in an unfinished book, the *Novum Organum*, whose aphorisms are giving, at best, hints about how to proceed in the process of building up a natural philosophy on the foundations of natural history. Moreover, again in Bacon’s own words, the interpreter of nature has the same diseased mind: the idols cannot be completely eradicated and ‘the doctrine of idols cannot be reduced to an art’ (i.e. a sort of mechanical and propaedeutic defensive procedure that would allow us to get rid of our inbuilt errors once for all).

Instead, a continuous discipline is advocated, a discipline of the mind described in medical and moral terms. In a series of papers, I have claimed that the medical vocabulary and the medical analogies so present in Bacon’s texts are worth taken seriously\(^4\). They are, at least in part, derivative from a larger cultural context, the Renaissance context of *medicina mentis*.\(^5\) If read in the

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2  Francis Bacon, *Cogitata et visa* in Benjamin Farrington, *The Philosophy of Francis Bacon*, Chicago: University of Chicago Press, 1966, 88. For citing Bacon’s works I have adopted the following solution: I will refer to the ‘standard’ edition, *The Oxford Francis Bacon* whenever available (see the list of abbreviations at the end of this article) by abbreviating it OFB followed by the volume number and page. When not available, I will refer to the edition realized by James Speding and his collaborators, abbreviated as SEH, followed by the number of the volume and page (see the list of abbreviations at the end of the article).


5  On the more general context of the seventeenth-century *medicina mentis* see Sorana Corneanu, *Regiments of the mind: Boyle, Locke and the Early Modern Cultura Animi Tradition*. Chicago: The University of Chicago Press, 2012; Dana Jalobeanu, “The Philosophy of Francis Bacon’s natural history”; Dana Jalobeanu, “Experimental philosophers and doctors of the mind”. More particularly, aspects of a practical and therapeutic philosophy in general and of a more empirical and experimental philosophy in special have been recently discussed by Jeremy
appropriate context, Bacon’s works gain supplementary levels of meanings and his apparently failed epistemological project regains some of its initial depth. Which is, however, this ‘appropriate context’? In this paper I will try to reconstruct, in part, the historical background involved in this cultural and philosophical project of reforming, restoring, or medicining the mind.

2. Medicine of the Mind: Moral and Therapeutic Aspects of Natural Philosophy in Bacon’s Writings

Francis Bacon shared with many of his contemporaries the general claim that a careful and complete investigation of nature has moral and therapeutic benefits for the human mind. The claim that natural philosophy can act as medicina mentis is widespread at the end of the sixteenth century. Sometimes, this is no more than a general reference to the ancient tradition, a commonplace topic in all the philosophical traditions of the Renaissance. In Bacon’s case, the claim is more specific. On a more general level, natural philosophy is often presented as a general program for ‘medicining the mind’; a thorough and elaborated training leading to mending the traditional prejudices and errors inbuilt in the mind, enlarging the powers of the intellect and effecting a substantial transformation of the whole human being.

On a more specific level, throughout his later writings, Bacon offers another candidate for medicining the mind and that is natural history. Besides providing the materials for induction, natural history is constantly presented as a good exercise for the mind to keep a constant contact with nature, i.e. escape the limited and distorted perspective of a ‘private experience’, keep the idols in check, record ‘facts’ undistorted by private beliefs and contribute, in this way,


Francis Bacon, The Advancement of Learning, SEH, III 394.

In the earlier polemical tracts, Bacon pictures a discipline of the mind that would do the preliminary work, clearing the ‘distorted mirror’ of its shadows and demons before any proper knowledge can be transmitted; in NO and later works, the two steps intermingle and it is impossible to clear the mind first and gather knowledge subsequently. The idols cannot be eradicated. Instead, the philosopher is on a continuous fight against his own limits, errors and passions. On the radical nature of such a transformation of the whole human being see OFB VI.9.

Natural history “constitutes a solid and eternal basis of true and active philosophy; this is which gives the first spark to the pure and real light of nature; and whose genius being neglected and not propitiated, has caused us to be visited most unhappily by that host of spectres and kingdom of shadows which we see fitting about among the philosophies, afflicting them with utter barreness in respect of works.” (Descriptio Globi Intellectualis SEH V. 508)
Moreover, Bacon sometimes claims that recording natural histories is the only way opened to knowledge.

Bacon’s natural histories are packed not only with ‘facts’, observations, reports and descriptions of experimental set-ups, but also with lists of epistemological, practical and moral benefits of experimentation, observation or recording of natural histories. Such is the repetitive iteration of the beneficial effects the negative or inconclusive experiments have upon the human mind: they are correcting our prejudices, help us fighting moral pride and self-love; they are cultivating humility and charity (OFB XIII. 53). Such is the insistence on the importance of recording observations that are contrary to our expectations: they fight against the common human tendency to cultivate sciences-as-one-would. Repeated experimentation does not only provide useful clues as to the variation or law-like behavior of observed phenomena, but has also therapeutic benefits in exercising our attention, patience, humility and constancy. Even recording a thorough natural history of a specific topic can be a therapeutic practice: the mind is kept in check, attached to the matters-of-fact, prevented to fall prey to its own fancies and desires.

In the general preface to Historia naturalis and experimentalis (1622), Bacon goes even further, urging his followers ‘to cast aside thoughts of philosophy’ altogether until ‘a tried and tested natural history has been collected and constructed’ (OFB XII 7). Here, natural philosophy in general and the very act of theorizing is said to lead to fabulation: constructing ‘fictions of worlds at will, worlds like tales’ (OFB XII 8-9) products of ‘the cells’ of one’s own ‘phantasy’. Natural history is therefore contrasted with the corrupted and idolatrous natural philosophy (OFB XII 9). The latter always tends to build self-sufficient and fanciful worlds of imagination; the former is a sane and therapeutic practice that will keep the mind in safe contact with nature.

In short, Bacon sees natural history as able to treat some of the diseases of the individual mind, like the constant tendency to produce science-as-one-would, or the hasty generalization so dear to some temperaments. It is also able to treat some of the diseases of the time, like sectarianism, idolatry, superstition of all kinds. Natural history is a good way to free the mind from its slavery to

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10 In fact, natural history is the only way to knowledge: “For these things are neither examined nor described for their own sake, but in fact there is simply no other alternative open to the human intellect [sed nulla prorsus alia patet Intellectui humano via]” (OFB VI. 7).

11 Epistemological: experiments of light; experiments are like the letters of the alphabet (they seem useless in themselves but they are the most useful thing in the world, they are necessary for any kind of discourse, DO. SEH III. 30). Practical and moral benefits: OFB XI. 41-42.

12 “We should beg men again and again to set aside for a while or at least discard these fickle and wrong’ headed philosophies which have put theses before hypotheses [Theses hypothesibus anteposuerunt], led experience captive and exulted over God’s works; and to read through with due humility and reverence the volume of creatures, and dwell and reflect on it, and, purged of opinions, to study it with a pure and honest mind.” OFB XII. 11.
one theory/doctrine or another. Of course, natural history is only the first step in a more complex process of learning and reformation. It is also a universal procedure, applicable to everything: we can construct a natural history of the heavens, but we can also construct a natural history of the affections, or a natural history of the political realm.

3. Natural History: a Puzzling Category

What is Bacon’s natural history? It is foremost a practice or a set of practices built upon a set of methodological rules (concerning the construction of experiments, recording the data and observations, formulating results and questions for further study, drawing conclusions etc.) It is also a vehicle of teaching and learning, the first knowledge to be gained in the more complex process of exploring the nature and medicining the mind. In numerous places Bacon claims that it is a new kind of natural history, reformed and purged of the traditional errors commonly shared by all the others (SEH IV 29).

Interestingly enough, very few interpreters contested Bacon’s claim. Unlike other topics in Bacon’s studies, there has been a general agreement until recently as to the novelty of Bacon’s natural history. Baconian natural history was seen as a break in the existing tradition of Humanist natural history (Rees, 2007) or as a creative borrowing from this tradition (Findlen, 1997). More recently, Deborah Harkness (Harkness, 2007) accused Bacon of plagiarizing an existing experimental and empirical discipline of natural philosophy and appropriating it for his own political purposes.

Such interpretations have a common assumption: namely that there was, at the end of the sixteenth century, a tradition – or a discipline – of natural history. More recent studies have however undermined this assumption. They have shown that one can rather talk about natural histories; often build upon divergent historical trajectories.

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meanings of the word *historia* and having different representations of the place of natural historical research on the map of learning\(^{15}\).

This paper aims to unearth one such ‘tradition’ of natural history, in many respects similar with Bacon’s. It consists of eclectic and encyclopedic writings investigating the natural world with the purpose of educating the mind and treating the traditional diseases of the Fallen humankind. My examples will consist of writings coming from the same cultural milieu: the Huguenot or Calvinist French milieu of the second part of the sixteenth century. I am talking about writings that were rather popular in the second part of the sixteenth century, belonging to authors that were well known in England and translated into English before 1600\(^{16}\). What my examples have in common is that they offer descriptions of the natural world/natural histories as part of a more general moral and therapeutic program. They also display a tendency to emulate Seneca’s *Natural Questions*, or, more generally, Seneca’s views on using natural philosophy for the cultivation of the mind.

I am proposing the name “Senecan natural histories” to describe such writings.\(^{17}\) They share a number of claims. They claim, for instance, that the study of nature is just a part of a more general program of cognitive and moral reformation. They see such a program as being empirical, tentative and non-systematic, with a strong practical dimension, anti-speculative (often explicitly equating speculative philosophy with idolatry). What such tracts have in common is the emphasis on the introductory and therapeutic component of a natural philosophy in service of natural theology. They also claim to be polemic tracts against enemies of religion sometimes denominated “Epicures” and “Atheists”. They are, in other words, militant treatises in a fight of the true Protestant cause against all sorts of enemies labeled idolatrous and irreligious. Such an anti-speculative, militant and Anti-Atheistic stance is familiar to the student of early modern period. It is, however, surprising to discover it in tracts coming from the second part of the sixteenth-century, at least half a century before the *libertinisme erudite* became an issue in the intellectual circles. Also surprising is another common feature of such tracts: they stress the importance of the philosophical community for improving the morals and for medicining the mind.

4. Pierre de la Primaudaye’s *French Academy*

My first example is a massive project of encyclopedic knowledge introduced as a ‘school’ of wisdom aiming at a complete reformation of the


\(^{17}\) Dana Jalobeanu, “Bacon’s natural history and Senecan natural histories of Early Modern Europe”.

mind. In its final form (printed in Geneva in 1608) it had 4 thick volumes dealing respectively with what La Primaudaye calls ‘moral philosophy’, ‘human philosophy’, ‘natural philosophy’ and ‘Christian philosophy’. There are more than 2000 pages of miscellaneous theories, facts and opinions about almost everything: from the critique of the universities and the traditional system of learning to the institution of manners, from a thorough exposition of the Creation to the careful description of the anatomy and workings of the brain, from a harsh moral and religious critique of the Epicures and Atheists to a detailed theory of winds. It is staged as a dialogue between four would-be philosophers that are trying to escape the troubles of the world, while advancing together on the road to wisdom and virtue. They assemble in a garden (hence the name ‘academy’) and devote a good number of days to philosophical discussions supposed to form the character, temper the passions and improve the faculties of the mind. The setting is very similar to another famous best-seller, a book defining in many ways the Neo-Stoic revival, namely Justus Lipsius’ De Constantia. However, in its first form, the French Academy dates from 1577, so a good number of years before Lipsius’ own bestseller, published only in 1584. Both are written in the form of a philosophical dialogue. However, while Lipsius’ book features a mature philosopher and his disciple, La Primaudaye’s ‘school of wisdom’ is theatrically set as a dialogue between four equally advanced disciples, struggling together on their road to wisdom. The four are given stage names: they are called Aser (Feliciteit); Amana (Truth), Aram (Highness/Excellency); Achitob (Brother of goodness). In a literary fashion, La Primaudaye pictures his characters as undergoing a process of intellectual and moral formation. The four young gentlemen aspiring to better themselves through learning in common the precepts of moral philosophy (in volume I) evolve to true philosophers discoursing about the natural world, and end up exhorting the true ‘Christian philosophy’ in the fourth volume, in the language of educated Divines. The French Academy is a book commonly associated with the Stoic revival of the late sixteenth century France and with the growing popularity of

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18 Complete title: L’Académie Française: Distinguée en Quatre Volumes traitans I. De la Philosophie Morale; II. De la Philosophie Humaine; III. De la Philosophie Naturelle; IV. De la Philosophie Chrétienne, Par Pierre de la Primaudaye, Escuyer, Seigneur dudit lieu et de la Barrée, Gentilhomme ordinaire de la Chambre de Roy, revue et corrigée de nouveau, pour Pierre et Jaques Chouet, Genève, 1608. In what follows I will mainly refer to the complete English edition, published in London in 1618. I will use the following abbreviations for the subsequent quotes and references from La Primaudaye’s works: I will quote the year of the edition, followed by the page.

19 The French Academy is organized on ‘days’ and chapters. Each of the volumes has 100 chapters.

20 As it has been shown, this Stoic or Neo-Stoic revival was loosely concomitant with the second part of the religious wars; the unsettling political climate giving rise to a growing interest in the Stoic literature on consolation and the moral use of philosophy, including natural philosophy. See Denise Carabin, Les idées stoïciennes dans la littérature morale des XVIe et XVIIe siècles (1575-1642).
'French academies'\textsuperscript{21}. It went through a large number of editions in French and was translated more than once in English, Italian and German\textsuperscript{22}. It was widely read and stood probably as a source of inspiration and basic encyclopaedic references for philosophers and divines.

The French Academy has a number of striking similarities with Bacon's program for the reformation of knowledge. It introduces a school of wisdom dedicated to the study of natural philosophy as a form of medicina mentis, a ‘certaine remedy and sound medicine for every vice and passion’, ‘able to inrich and cloath us with reason’ (La Primaudaye, 1618, 16). It is a societal project devised in a theatrical fashion to include the reader among the students of this philosophical school. It is build, like Bacon’s, on the presupposition that the fallen intellect, contaminated by affections\textsuperscript{23} and wandering from the right path,\textsuperscript{24} is unable, by itself, to reflect the light of nature.\textsuperscript{25} Hence the need of a discipline, a life in common, the shared values of a community of like minded explorers, living in common, glorifying God, cultivating the charity, (La Primaudaye, 1618, 20) sobriety, chastity and friendship.

In stressing the communal values of his Academy, La Primaudaye emphasizes the same tension between the universality of the message and the elective character of the training we find in Bacon. The teaching of the Academy is a teaching for everyone, but what is advocated is a way of life, a complete transformation of the human perspective. Since the mind is corrupt and prone to idolatry, the project of reforming it is bound to be a life-long exercise, (La Primaudaye, 1618, 19-20) while the driving force is likely to be the Christian duty and not the real hope to achieve an improved and undistorted state of mind (or virtue). What kind of regimen or therapy is efficient in this


\textsuperscript{23} It is worth noting that Bacon and La Primaudaye work with a very similar (medical) theory of passions represented as clouds and ‘distempers’ that are darkening and deforming the ‘mirror’ of the intellect. La Primaudaye (1618, 12).

\textsuperscript{24} La Primaudaye, 1618, 13: ‘it is proper to every man’s understanding, not to hold a steadfast and sure way in seeking out the truth, but to wander aside into divers errors (as a blinde man walketh in darknesse) and to fill itselfe rather with lies, and with a continuall desire and curiousitie of the new, unprofitable, and superfluous things, than to content it selfe simplicie with the truth, insomuch that finally it misseth of all’.

\textsuperscript{25} Compare with Bacon’s ways of describing the intellect as being contaminated by affections, a mere uneven mirror or an “enchanted glass” (SEH IV 431, SEH III 394-5). For a comparison see La Primaudaye, 1618, Advertisement to the reader, and also pages 6-7.
battle? Both La Primaudaye and Bacon are eclectic in their choice: examples and precepts might play a role in the struggle against passions, in the culture/cultivation of the mind. However, they are not enough. To the classical spiritual exercises of the Stoic moral philosophy they both add, as a better therapy and a healthier regimen of life, the study of nature.

The second volume of Pierre de la Primaudaye’s Academie francoise is called a ‘natural history’. It is introduced as a continuation of the first, a more advance stage in the school of wisdom, this time a school of nature; the mind is supposed to learn from ‘examples’ and relevant stories told by the creatures of God about the beauty and order of the universe. Or, rather, about an essential part of the Creation, a privileged ‘picture’ or mirror’ designed by God in the body and soul of man.27

The study of nature continues with a study of the Universe in the 3rd part of the French Academie (1608) – which is called natural philosophy (but is, in fact, a fairly traditional Renaissance cosmography). The purpose of this study of nature is twofold. On the one hand, natural philosophy describes ‘the world…a shadow of the brightness of God’, ‘like a great booke of Nature and naturall Theologie’ and therefore is a good way of learning about God. On the other hand, the study of nature is a school for those in search of medicina mentis.

This worlde is unto us a learned schoole, wherein the praise of God doth preach itselfe. It is a goodly large and rich shop, wherein this soveraigne and most excellent workman layeth open all his works, to this end, that he might be known by them. It is a temple, wherein there is no creature so little, but it is as it were a similitude and resemblance of the creator thereof, to shew and manifest him unto us. In a word, it is a Theatre, where the divine essence, his justice, his providence, his love, his wisedome have their working by a wonderful virtue in every creature (La Primaudaye 1618, 334).

Not only that the study of nature will turn our eyes to God, but the ‘text’ of nature has a privileged status since ‘all creatures contained in the universe are like so many preachers and general witnesses of the glory of the Creator’. Natural history serves therefore a double purpose: it is in fact natural theology, a discourse about God from his works. (La Primaudaye 1618, 334, 336, 338). It is also part of the medicina mentis in more than one sense. Natural history begins with the study of man and is said to provide the essential elements of self-knowledge. This study has important therapeutic features: while surveying the


27 The English edition makes this explicit from the very beginning. In striking ‘preface to the Christian Reader’, we are told that this book is a mirror destined to be used in the same pedagogical fashion taught by Socrates and Seneca, for the cultivation of the mind.
universe and listening to the ‘natural preachers’, our mind escapes the passionate and bounded individual perspective, reorganizes its cognitive and moral content and manages to get to a different level of understanding. 28 Moreover, this exercise has better chances to succeed in the case of Christian philosopher than in the case of the ancients (La Primaudaye 1618, 336). Unlike the ancient philosophers, the Christian philosopher has the help of God’s grace and the help of God’s second book (La Primaudaye, 1618, 337-8): reading the book of nature can be always assisted by a parallel reading of the Scriptures.

‘Natural history’ or ‘natural philosophy’ are sometimes used indistinctly in La Primaudaye’s volumes to designate the study of nature. It is however clear that he is talking about an empirical discipline. The study of nature is based on experience: we should simply turn our eyes to the reading of this book of Nature and ‘our eares to heare these naturall preachers’. We should study the body of man as in an ‘anatomy’ and we should inquire into the workings of the soul starting from its ‘visible effects’ it has on the body. We should ‘measure ourselves’ with the ‘measure of our own nature’ (La Primaudaye, 1618, 337). We know ourselves because we study the workings of the body; there is no faculty with which one can contemplate the workings of the mind (La Primaudaye, 1618, 410-1). Hence, the natural history of man is an empirical study of the human body, its workings and in functions, in search for the effects of the inner/hidden actions of the soul. Similarly, the natural philosophy/cosmographical description of the universe, is an ‘anatomy’ of the world in search for the testimonies of Divine interventions.

The major premise behind this approach is, however, that there is a very serious link and ‘collaboration’ between the mind and the body; that the actions of the mind are ‘manifested’ in the brain and that the faculties of the mind are modified by the composition, anatomical structure and functioning of the brain. Such a great ‘agreement’ between body and soul means that there has to be a serious agreement between the ‘corporeal’ and ‘spiritual’ medicine (La Primaudaye, 1618, 456): in fact, it is difficult to say whether they are two disciplines or one and the same.

And as there are divers mixtions of bodily qualities, so there are sundrie sorts of temperatures and complexions of the body, and consequently of soules in regardes of their faculties and affections. Therefore also there is great agreement between corporeall and spirituall Physicke. For this cause the Physictians both of the bodies and soules of men are to follow almost one and the same methode, and observe a like order in their arte and practise, every one according to the subject propounded unto them; in so much what the one doth unto the body, the other is to deale so with the soule... (La Primaudaye, 1618, 456)

28 This is very similar with the ‘standard’ spiritual exercises as advocated by Seneca in his *Naturales Quaestiones*. See for example Seneca, *Naturales Quaestiones*, preface to Book I and preface to Book III.
What we learn from natural history, therefore, is that we need one regimen of life, one kind of medicine that is both a corporeal medicine and a *medicina mentis*. Who are the doctors of the body or the doctors of the soul? Here La Primaudaye is adamant: there is no better doctor than each of us; the real purpose of all this study is to learn how to treat ourselves, how to devise a proper regimen of life (‘material’ and ‘spiritual’) while progressing on the way to wisdom.

There is also another striking similarity between the two projects of Bacon and La Primaudaye: the claim that natural history is a remedy against idolatry and superstition. By directing our gaze to nature, the mind is protected from vain theories and superstitious beliefs. By keeping the mind in a continuous activity of studying natural world, the intellect is less prone to fall prey to its own distempers (Bacon’s idols) or to the alluring fancies invented by one sect or another. It is also less prone to invent and imagine. In both cases, the production of natural history is strongly associated with a particular faculty of the soul, namely memory. For Bacon, there is a one-to-one correspondence between natural history and memory (SEH III, 221, 300; SEH I 469). For La Primaudaye, history in general, the product of human memory, has to be the first step to knowledge and is the first of sciences in a general map of learning (La Primaudaye 1618, 32-33). Its introductory character is supported by the strong role given to memory in the process of learning or the very process of knowledge (La Primaudaye 1618 36-38, 417-8). The memory is the faithful scribe, the Chancery of the mind (La Primaudaye, 1618, 417-8); the trustful recording of all events past and all the judgment of reason. It is only natural therefore that the whole knowledge begins with a natural history of man (body and soul), followed by a natural history of the universe (La Primaudaye, 1618, 14).

Which natural history? Here things are getting complicated, because La Primaudaye’s second volume does not resemble any of the known traditions of natural history. It is not a Plinian natural history; in fact, La Primaudaye is highly critical of Pliny and charges him with all sorts of accusations of heresy, Epicureanism and Atheism. It is not the kind of natural history one can find in Aristotle’s *Historia animalium*. It is not Humanist and philological natural history; indeed, La Primaudaye hardly quotes any authority at all besides the Scriptures in the whole 400 pages of his second volume. Meanwhile, the second volume is staged, unlike the first, in a very polemical atmosphere. The philosophical school is at war this time: a war against the common enemies of the age, superstition, idolatry and Atheism. More precisely, the Epicures and Atheists:

> My companions, I greatly bewaile the miserie of our age, wherein so many Epicures and Atheists live, as are daily discovered amongst us in all estates and callings. True it is, that the disagreement in matters of Religion amongst them that beare the name of Christians, is very great, and causeth much trouble in the Church: nevertheless I doubt

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29 La Primaudaye is heavily quoting Seneca and other Stoics on this in volume I.
not but that agreement might soone be made, if the word of God only might be the judge of true and false religion (La Primaudaye 1618, 331).

In a general sectarian war, however, La Primaudaye does not attack the religious enemies (Catholics, other Protestant ‘sects’) but the ‘philosophical’ sect of Epicures, i.e. clever manipulators of philosophical doctrines denying the immortality of the soul, claiming that the world is made of matter and governed by chance, denying divine Providence and the authority of Scriptures. They are said to possess learning and ‘poison’ human minds (La Primaudaye 1618, 332); they gain adepts and open schools; theirs is an open threat that needs to be met and neutralized. They are said to be everywhere but especially at the courts of Princes; they are also ‘signs’ of the general decay of times, proofs that the end of the world is near (La Primaudaye 1618 332-3). And it is against these enemies that La Primaudaye’s natural history is directed: not so much to refute and persuade them but to expose their falsehoods in public and offer counter-alternatives to a heretical natural philosophy. (La Primaudaye, 1618, 332).

Fighting this war is difficult because such adversaries do not recognize any of the established authorities. What they do recognize (or claim to do so) are the argument of reason and proofs taken from the study of nature.

I have heard them say sometimes, that they would give credite to naturall Philosophy in those things wherein the causes are proved by their effects. Now if we take this course to prove unto them a godhead, his providence, his future judgement, and the immortality of the soule, which way soever we turne our selves, either upward or downward, on the right hand or on the left, we shall find testimonies everywhere, which they may not in any way reject. For we have nature, the necessity of causes, proportions and similitude, the life, decency and dignity of man, the goodness of God, all which with one common consent, and as it were with one voice do teach and cry, that there is one God creator and governour of the whole world, and that the soul of man cannot be mortal (La Primaudaye 1618, 332-3).

Hence natural history; a natural history introduced as a school of nature where the student has to learn to listen to the ‘natural preachers’ glorifying the beauty and order of the world, while ‘arming oneself’ with ‘all the reasons and testimonies we have in nature against the Epicurean doctrine’ (La Primaudaye, 1618, 333).

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30 Said to be more dangerous than the disputes among the Christians; La Primaudaye, 1618, 331-2
31 La Primaudaye, 1618, 334. “This world is unto us a learned schoole, wherein the praise of God doth preach it selfe. It is a goodly large and rich shop, wherein this sovereign and most excellent workman layeth open all his works, to this end, that he might be known by them. It is a temple, wherein there is no creature so little, but it is as it were a similitude and resemblance of the creator thereof, to shew and manifest him unto us. In a words, it is a Theatre, where the divine essence, his justice, his providence, his love, his wisdome have their working by a wonderful virtue in every creature, even from the highest heaven into the centre of the earth.”
5. Context and Sources: Medical Histories

Nothing can be more remote from a ‘Humanist natural history’. La Primaudaye does not collect curious facts and wonders, make little use of analogical thinking, emblematic association or literary connections. Although encyclopaedic in nature and displaying a large number of anatomical and historical facts, the second volume of The French academy is silent on the sources and quotes extensively from Scriptures. Although displaying a serious knowledge of Galen’s anatomical writings and case studies, La Primaudaye does not offer specialized medical knowledge. The natural history has an introductory character; it is not knowledge for the natural philosopher or the doctor, but knowledge for every student of (human) nature; a thorough description of the structure and functions of the body in its relation with the mind.

Through a number of features, La Primaudaye’s natural history resembles another kind of writings well known at the end of the sixteenth century, belonging to a ‘medical tradition’ of natural history. They are historia anatomica or historia medica: anatomical descriptions of human body, its organs and their functions (but without a general causal explanations attached to it)\(^3\) and case histories. As Gianna Pomata has shown, by the end of the 16\(^{th}\) century historia became a key term in the medical writings as part of a reappraisal of the epistemological use of historia (Pomata, 2005). Historia anatomica or historia medica are sensata cognition: knowledge based on sense-perception and observation (as opposed to knowledge derived from principles or causally organised).\(^3\) This ancient meaning is conflated often with the Aristotelian meaning of natural history: as preliminary, introductory, descriptive knowledge of individuals, without a causal explanation.

Meanwhile, the works belonging to this ‘medical tradition’ are not devoid of moral (and sometimes religious) meaning: they can be moralizing anatomies\(^3\) or moralizing histories of man.\(^3\)

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\(^3\) Historia is meant in the sense of observation, that is, a knowledge proceeding from one’s own direct experience of collected from trustworthy reports of what was experienced by others in the course of time. This was one of the current meanings of the term at the end of the sixteenth century. See Pomata, Giana. “Praxis Historialis: The Uses of Historia in Early Modern Medicine.” *Historia: Empiricism and Erudition in Early Modern Europe*. Eds. Giana Pomata and Nancy B. Siraisi. Cambridge: MIT Press, 2005. 105-146; Jalobeanu, Dana. 2012 (forthcoming).

\(^3\) Alberti, Salomon. *Historia glansanque partium humani corporis*. Wittenberg, 1583.
6. Using Medical Literature for Confessional Purposes

In fact, such moralizing anatomical descriptions have been used, in the sixteenth century, more than once as weapons in the confessional war. It is the case of La Primaudaye too. Or rather, it is the case with La Primaudaye’s major source. Because, as K. Drochner has shown a while ago, the actual content of the second and third volumes of the French Academy draws heavily from an earlier source, one of the benchmarks of the Huguenot theology: Pierre Viret’s *Instruction Chrestienne*, 1564.36

Pierre Viret (1511-1571) was sometimes called ‘the forgotten reformer’.37 In the sixteenth century his intellectual profile is comparable with that of Calvin whose friend and collaborator Viret was for most of his life. He was the most popular preacher in sixteenth century France, founded two of the first reformed academies, was directly involved in some of the grim episodes of the religious wars, and published a large number of books that went through a considerable number of editions in French, Latin and English.38 His *Instruction Chrestienne* was one of the important theological works of the Reformation. Unlike Calvin, however, Viret was not a systematic thinker: his works are brilliant pamphlets and satires, interesting sermons, scholarly eulogies or encyclopedic sources of information. They are also scattered, non-systematic, badly organized, always re-circulating materials from one edition to the other and very difficult to follow. The *Christian Instruction* went through a number of different editions announcing a different number of volumes, chapters or ordering of the chapters. In 1564, in its ‘final form’ the book announces three volumes on the title page but contains only two (the third volume was never published). The second volume of this work is the one that was carefully studied, copied and rewritten by Pierre de la Primaudaye. Its title: *Exposition de la doctrine de la foy chrestienne, touchant la vraye cognoissance et le vray service de Dieu; et la Trinite des personnes en l’unite de l’essence divine; et en la manifestation d’iceluy en la creation tant du grand que du petit monde, et en sa providence de toutes les creatures, et principalement en la nature humain*, Geneva, 1564. In his dedication to the faculty of medicine of Montpellier, Pierre Viret introduces his work as one of natural theology, written for the learned (philosophers and physicians) to provide helps and ‘medicines’ the human mind in its path to God.

35 Pomata, *Praxis historialis*; Jalobeanu, “Francis Bacon’s natural history and the Senecan natural histories of early modern Europe”.
36 Drochner, *Darstellung*. For a more detailed discussion see Dana Jalobeanu, “Idolatry, natural history and spiritual medicine”.
38 The first part of the *Christian instruction*, translated into English J. Shuttle, 1565. A Christian Instruction, 1573.
The book is a dialogue between a teacher and his pupil, describing what Viret calls an ‘anatomy’ of the created world and an ‘anatomy’ of the body and soul (as elements of the Created world). Drochner has made an extensive list with long paragraphs that are almost identical in Viret and La Primaudaye. What he didn’t do was to compare the significant differences between the two. What we don’t find in Viret is exactly the Stoic setting of La Primaudaye’s school of wisdom: the two characters of the dialogues are in a strict teacher to pupil relation, the pupil (Nathaniel) learning in a very traditional fashion by memorizing and accepting whatever the teacher (Phillipe) has to say. The purpose of the lesson is to learn more about the body, soul and the world; for this purpose, the ‘objects’ of learning are shown as in an ‘anatomy’. Interestingly enough, there is no mention to natural history and all the references to philosophy and the philosophers are critical references. Unlike the ancient philosophers, the true Christians have access to the truth; at least the elect, those who can read the Book of Nature in a special way, guided by the Holy Spirit.

Like La Primaudaye, Viret is extremely polemic against idolatry and superstition, seen as bodily diseases of the imagination. Idolatry is a disease produced by the very mixing of passions with reason. The mind follows a general tendency to believe what is in accordance to our desires. As a result, the judgment errs and our will follows our imagination. This is the reason, Viret claims, that our times are so full of Epicures and Atheists (Viret, 1564 II 403-4). However, it is worth noticing that idolatry is a philosopher’s disease. It does not come from the basic unreasoned affects but form an over-activity of the mind that tries to prove by false reasons its own fancies: the heretical and idolatrous Epicures are masters of argumentation and hair splitting. They are assembling masterful arguments from old books to prove the conclusions they already have in the same ways the ancient Jews were masterfully assembling arguments against Christ’s resurrection (Viret, 1564, II 404ff). One needs a sound mind and the help of powerful ‘medicines’ to resists the argumentation of ‘Epicures’. This leads to a long discussion about the similarities between the true scientia (producing sound unwavering knowledge) and faith (producing the same) and the way in which the two can act as ‘helps’ and ‘medicines’ of the mind. From this perspective, the whole project of drawing an ‘anatomy’ of the mind, body and the world can be seen as a response to the growing danger of ‘idolatry’.

39 “Je conjoin en ce volume, le livre de nature, avec le livre écrit des lettres divines, & la philosophie & théologie naturelle, avec la supernaturelle: & monstre comment les creatures & choses visibles & corporelles, sont similitudes & images des choses invisibles & spirituelles, & comment par la connaissance des unes nous pouvons monter à la connaissance des autres, voire jusqu’à Dieu le creator & le souverain bien de tous. Mais le plus surquis je me suis arresté, c'est en la consideration de la creation & composition & nature tant du corps que de l’ame de l’homme, duquel j’ai fait comme une anatomie, non seulement au regard du corps, mais aussi de l’ame d’icelui.” (avant propos, np).
La Primaudaye’s influential book, *The French Academy* can therefore be seen as a repackaging of Viret’s ‘anatomy’ in a Stoic/Senecan context and with a more ambitious moral and pedagogical program attached to it. It is, I think, a programmatic attempt to put together the Senecan form of the medicine of the mind with the very core of Protestant/Huguenot theology. In this attempt, the medicine of the mind serves as a weapon in a war: a war against ‘idolatry’. A philosophical war in which, as I’ve tried to show, the empirical study of nature – under the name ‘natural history’ – plays a major role, still insufficiently explored.

7. “Senecan Natural Histories”: Do We Have a Genre?

One common move in the revival of Stoicism was to make Seneca’s works acceptable for Christians by presenting them as mere exercises of virtue, eclectic when it comes to doctrine and useful regardless the theoretical errors they contain. When it comes to Seneca’s physics, that meant to emphasize Seneca’s own claims that his physics is not self-sufficient but it is a mere exercise of the mind engaged ‘outside of herself’, with Nature and with God.40 True, *Naturales quaestiones* are claiming that the world will end in a final and fiery conflagration, that the Deluge is still to come, or that comets are celestial bodies floating in the continuum of pneuma. But these claims are coached in the language of a provisional natural philosophy; they are simply the best knowledge one can get from the sources available at a certain moment. In fact, throughout the *Naturales Quaestiones* Seneca emphasizes the provisional character of his collection of histories, theories and exercises of the mind (Jalobeanu 2008; Jalobeanu, 2012 forthcoming). The real work is to come and is left to the future generations of students of nature to do their own explorations and reach their own conclusions. There are a good number of arguments in Seneca’s *Naturales Quaestiones* to read the whole work as a natural history (French, 1994; Jalobeanu, 2012 forthcoming). And the work was read in such a way by its sixteenth century students.

Another way to go in this process of reviving the Stoic doctrines was to emphasize the utility of Senecan physics in the sectarian and philosophical debates and the importance of his moral conclusions for the present. Seneca’s own arguments against doctrines and the dangers of enslaving the mind to a theory were widely used in sixteenth century polemics.

My second example is another practically unknown book of the late sixteenth century coming from the same milieu. Judging from the title is a translation of Seneca’s works. *Les oeuvres morales et meslees de Seneque, traduitie de latin en francois et nouvellemment mises en lumiere*, Jean Arnauld.

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Geneva, 1606. It is a work in three volumes that went through at least four editions in 10 years. The composition of the three volumes seemed to have changed from one edition to the other, as it was often the case at that time, especially when we have to deal with a composite collections containing works by Seneca, fragments of the early Stoics, fragments from Epictetus and Diogenes Laertius, other fragments from Roman Stoics, a lengthy life of Seneca and an extended and scholarly introduction into Stoic philosophy with a special emphasis on Stoic physics.

The author of this composite edition is much better known as a leading Calvinist than as a Humanist scholar. His name is Simon Goulart. Simon Goulart (1543-1628) was educated in law and theology (in Paris) converted to Calvinism, survived the night of St. Bartholomew, flew to Geneva and began a second a more successful career. Towards the end of his life (and after the death of his good friend Theodore Beza) he became the Head of the Company of Pastors of Geneva (1608-1628). He wrote an enormous number of works: pamphlets, sermons, consolation literature, poems; and he was also well known as a translator of Seneca, Plutarch or Justus Lipsius.

Goulart’s edition of Seneca is extremely interesting and was, so far, subject to very little scholarly attention. However, my purpose here is limited: I will only discuss a number of peculiar features of its third volume (1606), dedicated to Stoic physics. The volume begins with an introduction to Seneca’s Naturales Quaestiones, Sommaire de la philosophie naturelle ou meteorology de Seneque, comprise en sept livers, intitulez Les Questions naturelles. The focal point of the introduction is to explain that Seneca’s project was not to write a systematic natural philosophy (like Aristotle), but something different. The importance of Naturales Quaestiones did not reside in the theories contained (many of which are erroneous and contrary to the Christian faith) but in the very method used for the exploration of nature. Seneca collected and discussed various philosophical opinions without endangering the ‘public peace’. Moreover, his explanations of nature were and still are useful because they prevent people to fall prey to ‘Democritian philosophy’. The real importance of Seneca’s Naturales Quaestiones is that they are refuting the Epicureans ‘il fait le process aux Epicuriens et Atheistes & elevent l’ame hors de la terre’; therefore ‘il refute la felonne ingratitude des Atheistes & libertins’ (Goulart, 1606, 359).

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The same line is taken in the second part of the volume, in an extended introduction into Stoic philosophy *Ample discourse sur la doctrine des Stoiques, notamment sur celle de Seneque, dressée par le translateur des livres et traités précédens* (hereafter AD). Simon Goulart emphasizes the utility of the Stoic/Senecan doctrine in a time of troubles, idolatry and irreligion. Despite their mistakes, the Stoics offered sets of exercises for cultivating virtues, sets of arguments for fighting against Atheism and irreligion and a true school of virtue. Goulart offers a summary of Seneca’s views on education, comparing favorably such a ‘program of studies’ with the pour education offered by the universities.

A large part of the AD is devoted to a summary of Stoic physics: the shape and structure of the universe, theory of elements, and the theory of soul (and body). Goulart draws a general account of Stoic’s opinions about the physical world. They are often in contradiction to one another; and each time this happens, Goulart emphasize the fact that the true utility of his summary is not to adopt such erroneous opinions but to understand this way of studying nature with a moral and religious purpose. He claims that behind their diversity all Stoics agreed upon the fact that the Universe is governed by a divine Providence (Goulart, 1606, 344, 352, 360) and that the true purpose of studying nature is to habituate the mind with the contemplation (Goulart, 1606, 347) and understanding of its works (Goulart, 1606, 345).

As it is packed together, the third volume of Goulart’s edition of Seneca shares a number of features of the ‘Senecan natural histories’: it advocates the importance of an eclectic reading of the book of nature with an emphasis on pedagogy, learning, forming good habits of the mind, leading the mind to God through a contemplation of his Creation. It is highly critical of doctrines and speculative philosophies, with a strong emphasis on finding the arguments to fight the Epicurean doctrine(s). It emphasizes the utility of a careful reading of Seneca’s Natural Questions and other Stoic fragments about Nature (despite their divergences) for moral, therapeutic and religious purposes.

**Conclusion**

If read against this background of a Neostoic revival and a shared growing interest in a certain Senecan natural history, Bacon’s project look considerably different than the one painted so far by canonical histories of philosophy or histories of science. It is less a spectacular and singular failed attempt to reform the human being and more a novel approach in a specter of similar approaches with similar purposes and similar methods. Common to all these attempts was a certain understanding of natural history as an empirical study of nature with moral, theological and therapeutic value. It is this concept of natural history, I claim, that Bacon appropriated, used and eventually
transformed in his project of building up a new natural philosophy. Consequently, only by exploring this relatively forgotten background, the historian of the future can uncover the depth and originality of Bacon’s project.

ABBREVIATIONS


BIBLIOGRAPHY

Primary Bibliography


**Secondary Bibliography**