

A Jesuit's Tree of Knowledge

A beautiful, leather-bound copy of the *Mathématique universelle abrégée* sits at the core of my collection. Published in 1728 by the Jesuit philosopher Louis-Bertrand Castel, a rising star in the scientific circles of Paris at the time, this encyclopedic work was written as a comprehensive, yet abridged course on no less than the total sum of human knowledge. "Mathematics" here has to be understood in the broad, early modern sense of "science" (*mathesis* in Greek). Scripture said that God made the world in measure, weight, and number, which Castel associated with the fields of geometry, physics, and cosmography, the three main branches of his "tree of knowledge."¹ These branches in turn split into hundreds of intertwined twigs of arts and crafts, as well as leaves, flowers, and fruit for his readers to pluck. The goal was to provide a general overview of the interconnectedness and unity of the sciences.

Like many natural philosophers of his day, Castel believed in the unity of nature and thought that a meaningful theory of the world must encompass everything, past and present. He maintained that the human mind should attempt to embrace this whole, if only to experience religious awe in the process. The wide variety of works he published during his lifetime demonstrates that he tried to live by his ideal and that he expected others to follow suit. As a student of Castellian philosophy, I should like to own his entire corpus one day.² In the meantime, I have been attempting to capture the spirit that animated polymaths like him in the seventeenth and eighteenth centuries since 2008. Few of the authors I collect actually undertook anything like Castel – the encyclopedic *oeu-*

¹ *Wisdom* 10:20[21]. The proper order reads "in number, weight, and measure," but Castel alters it to fit his organizational scheme.

² See the wishlist for a few examples.

vre of Athanasius Kircher, one of Castel's sources of inspiration, is one notable exception. Yet many of them produced works of philosophy that unproblematically folded God, nature, and human history and mythology into single, coherent theories or narratives. Taken together, they form a fascinating tangle of scholarship.

My first acquisition, an obscure Benedictine textbook of natural philosophy (Seeauer's *Philosophia Antiquo-Nova*) that I found in a bookstore in Salzburg, introduced me to the history of early modern science, my current field of study. From there, my collection grew in tandem with my academic interests to include well-known works such as Pluche's *Spectacle de la nature* and Kircher's *Mundus Subterraneus*, as well as lesser-known publications by the Abbé Le Brun and the Abbé de Vallemont.

Much like Castel's tree of knowledge, my collection developed organically, one interesting find leading to the next. For example, my acquisition of Joseph François Lafitau's *Moeurs des sauvages comparées aux mœurs des premiers temps*, a comparative study of Native American and Ancient Greek customs, led me to purchase works that either had inspired Lafitau (such as Acosta's *Historia Natural y Moral de las Indias*) or borrowed from him (as with Abbé Banier's *La mythologie et les fables* and Goguet's *De l'origine des loix, des arts, et des sciences*). It also opened me onto Lafitau's lesser-known works (like his *Histoire de Jean de Brienne*) and those of his brother Pierre François Lafitau, Bishop of Cisteron (who authored a *Vie de Clément XI*), not to mention the writings of Père Castel, whom I first encountered in his reviews of the *Moeurs des sauvages* in the Jesuit-run *Mémoires de Trévoux*. Similar ramifications could be drawn between most of the items in my collection, as the diagram appended to the bibliography illustrates.

My bibliography features forty one titles covering a broad variety of topics, ranging from Aristotelian physics to Indigenous mythology, ecclesiastical history to occult science, the history of the sky to the theology of water. Behind this apparent eclecticism lies an organizing principle that, though initially diffused, has become more focused over the years. Indeed, the overwhelming majority of these texts were written by Christian ecclesiastics who testified that their prerogative was to attend the great tree of knowledge. Most of these were philosophers, historians or natural theologians – often a combination of all three – and most were also Jesuits professors or missionaries who endeavored to reconcile ancient and modern knowledge. Over the last four years, my academic interest in eighteenth-century Jesuit philosophy and in Père Castel in particular has steered my collection. It will come as no surprise, then, that Castel’s French predecessors, colleagues, and successors (for example, PP. Bouhours, Feller, Lafitau, Pardie, Regnault, and Souciet) are prominent figures on my shelves. To this growing “trunk,” I also grafted scholarship written by modern Jesuits whose research serves as a commentary upon the collection.

My desire to reconstruct the “tree of knowledge” of eighteenth-century Jesuits is not driven by my scholarly interests alone. It also takes root in my spiritual curiosity. Born in the Province of Quebec in 1986, I was raised in a secular and largely agnostic society, shaped with the widespread but historically false notion that “the Church” has always been an obscurantist institution.³ While remaining true to my upbringing, with time and study, and through my collection especially, I came to appreciate the spiritual

³ In the 1960s, Quebec underwent its so-called “Tranquil Revolution,” its coming of age both as a French-speaking nation and as secular modern state. In the preceding decades, the Catholic Church held a firm grip on schools and hospitals, and still have considerable influence on governmental policies.

depth, richness and creativity of early modern ecclesiastical philosophers. They have taught me to think holistically and, like them, I aspire to a kind of universality that takes into account the interconnectedness of the sciences and the humanities.

Core of the Collection:

1. Acosta, José de, s.j. *Historia Natural y Moral de las Indias. En que se tratan de las cosas notables del cielo, elementos, metales, plantas y animales dellas y los ritos, y ceremonias, leyes y gobierno de los indios.* Cerretera Pichacho-Ajusco: Fondo de cultura económica, 2006.

I obviously could not afford an original copy of Acosta's famous Natural and Moral History of the Indies. This modern reprint belongs to my collection because its content was extremely influential, especially within Jesuit circles. It is essential, for instance, to understand J.F. Lafitau (below).

2. Andreucci, Andrea Hieronimo, s.j. *Hierarchica Ecclesiastica in varias suas partes distributa et canonico theologice exposita.* Rome, Generosi Salomoni, 1766.

The *Ecclesiastical Hierarchy* of the Catholic Church in the early modern world is rather complex, as is the canonical law tradition that sanctioned that structure. Though not directly related to my 'tree of knowledge,' this Latin work was written by a Jesuit and serves as a useful reference work.

3. Anonymous [Maurice, Thomas?]. *A Dissertation on the Oriental Trinities [excerpted from the fourth and fifth volumes of Indian Antiquities.]* London: C. and W. Galarin, 1801.

Chronologically speaking, this work is an outlier. Yet thematically it overlaps with and draws on several historical and theological works devoted to the comparative analysis of ancient mythology, a subject of great interest to men like Banier, De Pauw, Lafitau and Gautruche. It is, moreover, a beautiful item.

4. Aquinas, Thomas. *Summa Theologiae*, 5 vol. Madrid: Bibliotheca de autores cristianos, 1951.

Another chronological outlier, but essential to the collection because the philosophical and pedagogical curriculum of the Jesuits was fundamentally Thomist. This beautiful Latin edition of the *Summa Theologiae* also fits nicely with the encyclopedic spirit of several other items in the collection, a *summa* being a comprehensive repository of knowledge.

5. Banier, Antoine, abbé. *Mythology and Fables of the Ancients, Explain'd from History.* 4 vol. Trans. from the French. London: Buchanan's-Head, 1739.

English translation of Banier's famous text, *La mythologie et les fables expliquées par l'histoire*. This is a voluminous, encyclopedic examination of ancient mythology, read through the lens of history. Common in the seventeenth and eighteenth century, especially among religious erudites, were attempts such as Banier's to rationalize stories about the gods and heroes by conjecturing about the historical events and people that gave rise to them.

6. Bodin, Jean. *Methodus ad facilem historiarum cognitionem*. Amsterdam, Johannis Ravelsteins, 1650.

The oldest book in my collection. This pocket edition of Bodin's *Method for the Easy Comprehension of History* is another influential work with which ecclesiastical historians and theologians would have been familiar, especially in France.

7. Bouhours, Dominique, s.j. *La manière de bien penser dans les ouvrages d'esprit. Dialogues. Nouvelle édition*. Paris: Florentin Delaulne, 1715.

The *Way of Thinking* is a well-known textbook of rhetoric and logic by the eminent professor of rhetoric at the Jesuit College of Paris. I suspect the younger generation of Jesuits in my collection would have read this text and may have even taken courses with its author. A solid foundation in the oratorical arts underpinned all of Jesuit education and therefore had important ramifications in their works in natural philosophy, history and theology.

8. Bussièrre, Jean de, s.j. *Flosculi Historiarum, delibati ex rebus praecipuis quae ab orbe condito ad nostra tempora contigerunt*. 4th ed. Venice: Combi et Lanov, 1664.

The *Little Flowers of Histories* are a good example of an abridged sacred history (and chronology), starting with the creation of the earth and ending in the early modern age. Written in Latin by a French Jesuit, this book underwent many reprints. This particular copy is in a poor condition: I salvaged it from an outdoor market in Rome while it was raining...

9. Castel, Louis-Bertrand, s.j. *Mathématique universelle abrégée, à l'usage et à la portée de tout le monde, principalement des jeunes seigneurs, ingénieurs, physiciens, artistes, etc., où l'on donne une notion générale de toutes les sciences mathématiques et une connaissance particulière des sciences géométriques au nombre de cinquante-cinq traités*, 1st ed. Paris: Pierre Simon, 1728.

The centerpiece of my collection, this book also inspired its title. Filled with organizational trees reminiscent of those of Petrus Ramus, Castel's *Universal Mathematics* is a kind of encyclopedic repository of geometrical, physical and cosmographical knowledge. It is quintessentially Jesuit in its pedagogical approach, yet idiosyncratic in its underpinning methodology and its desire to make mathematics accessible to the general public. Castel's textbook is a rarely acknowledged landmark in the history of education.

10. Castel, Louis-Bertrand, s.j. *L'homme moral opposé à l'homme physique de M. R[ousseau]*. Toulouse: s. l., 1756.

Castel was not only a geometer and natural philosopher; he was also a theologian and moralist, struggling with the rising materialistic and deistic values of his day. J.-J. Rousseau's *Discourse on Inequality* is the target of Castel's *Moral Man opposed to the Natural Man*. Interestingly enough, Castel interprets Rousseau's work as an essay of natural philosophy, not as political theory.

11. De Pauw, Cornelius. *Recherches Philosophiques sur les Egyptiens et les Chinois. Par Mr. de P****. 2 vol. [from different sets]. Berlin: G. J. Decker, 1773.

A well-known work of erudition, in which the Dutch *philosophe* argues against the Egyptian origins of the Chinese people by employing a comparative analysis of their writing systems, customs, and mores. De Pauw was not a man of the cloth, but he was well versed in the accounts of Jesuit missionaries, hence the inclusion of his *Philosophical Inquiries* here.

12. Dupin, Louis-Elie, R.P. *L'Histoire profane depuis son commencement jusqu'à présent*, 6 vol. Anvers: Jean Francois Lucas, 1717.

Another universal history (like Bussièrè's), this time focusing on lay, "pagan" events rather than Biblical or Providential ones. Dupin was a prolific historian and theologian (best known for his monumental *Bibliothèque universelle des auteurs ecclésiastiques*), who sided against the Jesuits in their theological disputes. His *Lay History*, unfortunately, is in sorry condition: another rescued set.

13. Expilly, Jean-Joseph, abbé. *Le Geographe Manuel, contenant La Description de tous les Pais du Monde, leurs qualités, leur climat, le caractere de leurs Habitans, leurs Villes capitales, avec leur distances de Paris, & des Routes qui y mènent, tant par terre que par mer; les Changes & les Monnoies des principales Places de l'Europe, en correspondance avec Paris; la maniere de tenir les Ecritures de chaque Nation de l'Europe, &c*, 4th edition. Paris: Bauche, 1760.

The abbé Expilly was a cosmographer. His various charges led him to travel and gather information about the geography, history, and populations of various locations throughout Europe. The *Handy Geographer* is the 18th-century equivalent of a travel guide, a condensed encyclopedia in its own right, containing descriptions of all one needs to know when travelling through Europe and abroad.

14. Fabricius, Jean Albert. *Théologie de l'eau, ou essai sur la bonté, la sagesse et la puissance de Dieu manifestées dans la création de l'eau*. Paris: Chaubert et Durand, 1743.

A good example of 18th-century natural theology. Fabricius's *Theology of Water*, here anonymously translated into French, attempts to demonstrate the existence and properties of God through what we would now call intelligent design. The author in this case chose to examine the properties of water and water circulation. A fascinating read, in parallel with Lesser and Pluche (below).

15. Flexier de Réval, l'abbé [François Xavier de Feller, ex-s.j.]. *Cathéchisme philosophique, ou recueil d'observations propres à défendre la religion Chrétienne contre ses ennemis. Ouvrage utile à ceux qui cherchent à se garantir de la contagion de l'Incredulité moderne, & surtout aux ecclésiastiques chargés de conserver le précieux dépôt de la foi.* Paris: Berton, 1777.

Flexier de Réval is in fact a pseudonym (and quasi-anagram) used by the abbé François Xavier de Feller, who was a Jesuit before the suppression of the Society in 1773, and the author of several works, including an important biographical dictionary. This Philosophical Catechism is an example of Christian apologetics which, like Castel's *Moral Man*, targetted a new generation of irreligious authors.

16. Flexier de Réval, abbé [François Xavier de Feller, ex s.j.]. *Observations philosophiques sur les systèmes de Newton, le mouvement de la Terre et la pluralité des mondes. Dialogue des Morts sur le séjour des vivants, avec une dissertation sur les tremblements de terres, les épidémies, les orages, les inondations, etc.* Paris: Charles Pierre Berton, 1778.

A fascinating set of fictional dialogues between some of the great ecclesiastical natural philosophers and intellectuals of the 17th century and their modern detractors: Huet against Newton on the question of universal gravitation; Bellarmino against Galileo on the movement of the earth; Kircher against Huygens on the plurality of worlds. The *Philosophical Observations* also contains a fascinating *Dissertation* on Aristotelian meteorology. Castel is one of Feller's sources.

17. Gautruche, Pierre, s.j. *Les Dieux et la religion des payens, pour l'intelligence des poètes & des anciens Auteurs Grecs & Latins./ Dii et Religio Ethnicorum, Ad Poetarum Authorumque veterum sive Graecorum sive Latinorum intelligentiam. /De Goden en Godsdienst Der Heydenen, tot verstand der Dichters, en oude, zoo Grieksche als Latijnsche, Schrijvers.* Utrecht: François Halma, 1690.

The Jesuits' fascination with fables and mythology and their desire to synthesize past and present philosophy feature prominently throughout my collection. This trilingual (French-Latin-Deutch) dictionary on the *Gods and the Pagan Religion* exemplifies this interest in genealogical connections between the religions of various cultures. It also bears a mysterious encoded inscription on the cover page...

18. Goguet, A. Y. et A. C. Fugere. *De l'origine des loix, des arts, et des sciences; et de leurs progres chez les anciens peuples.* 3 vol. The Hague: Pierre Gosse Junior, 1758.

A nicely illustrated set. Although Goguet was not an ecclesiastic, his comparative reconstruction of the *Origins of laws, arts, and sciences* is indebted to the work of Lafitau.

19. Grosier, Jean Baptiste Gabriel Alexandre, L'abbé, ex. s.j., *Mémoires d'une société célèbre [s.j.], considérée comme corps littéraire et académique, depuis le commencement de ce siècle, ou Mémoires des jésuites sur les Sciences, les Belles-lettres et les Arts.* 3 vol. Paris: Defer Demaisonneuve, 1793.

These *Memoirs of a Famous Society*, published at a time when French revolutionaries were severing ties with the *ancien régime*, was put together by a former Jesuit who, like Flexier de Réval (Feller), still believed in the importance of the intellectual legacy of his former order. The anonymous articles of this compilation are for the most part excerpted from the Jesuit-run periodical *Mémoires de Trévoux*, and cover a wide range of topics in natural philosophy, history and religion. It includes several pieces by Castel and his colleagues.

20. Kircher, Athanasius, s.j. *Mundus Subterraneus in XII Libros digestus*. Ed. Gian Battista Vai. Arnaldo Forni Editore, 2011.

Facsimile edition of the sumptuously illustrated *Subterranean World*, Kircher's most influential masterpiece. One of Castel's prime sources of inspiration, it is also referenced (either positively or negatively) by most natural philosophers in my collection.

21. Lafitau, Pierre François, ex. s.j. *La Vie de Clement XI, Souverain Pontife. Par M. de Lafitau, Eveque de Sisteron*, 2 vol. Padua: l'Imprimerie du Seminaire, 1752.

Brother of the better known Joseph François Lafitau (below), the Bishop of Cisteron wrote many sermons, a historical account of the Bull *Unigenitus* against Jansenism and, here, a *Life of Pope Clement XI*, who was involved in the polemic.

22. Lafitau, Joseph Francois, s.j. *Moeurs des sauvages américains, comparées aux moeurs des premiers temps*. vol. 2, 3, 4. [vol. 1 missing]. Paris: Saugrain l'aîné, et Charles-Estienne Hochereau, 1724.

One of my earliest and most prized acquisitions. This incomplete set of the Lafitau's *Customs of American Indians compared to the mores of the first times* stands out for its gorgeous fold-outs. Lafitau aimed to reconstruct the primeval religion of Adam and Eve through the comparative study of New World *sauvages* with Ancient World barbarians; he is also widely regarded by anthropologists as the forefather or comparative ethnology. Lafitau was a missionary in Canada for several years before he wrote this masterpiece of erudition.

23. Lafitau, Joseph François, s.j. *Histoire de Jean de Brienne, roy de Jérusalem et Empereur de Constantinople*. Paris: Charles Moettes/Pierre Simon, 1727.

A very rare and little-known biography written by Lafitau after his return from New France, recounting the deeds of the crusading knight Jean de Brienne, who became King of Jerusalem and Emperor of Constantinople in the early 13th century.

24. Lafitau, Joseph François, s.j. *Die Sitten der americanischen Wilden im vergleich zu den sitten der Fruehzeit*. Leipzig: Edition Leipzig, 1987.

This is a facsimile of the abbreviated German edition of Lafitau's *Moeurs des sauvages*, originally embedded within Johann Justinus Gebauer's 1752-1753 *Allgemeinen Geschichte der Lander und Volker von America (General history of the land and people of America)*.

25. Le Brun, Pierre, R. P. *Histoire critique des pratiques superstitieuses, qui ont séduit les Peuples, & embarrassé les Savans. Avec la méthode et les principes pour discerner les effets naturels d'avec ceux qui ne le sont pas. Augmented ed.* vol. 1, 2, 3 [4th vol. went missing in shipping!] Paris: Guillaume Desprez and P. G. Cavalier, 1750 [vol. 1 and 3]; Paris: Poiron, 1750 [vol. 2].

Le Brun was an Oratorian priest who lived in Paris, where he wrote on and taught philosophy, theology, and liturgical history. This *Critical History* analyzes and critiques all sorts of superstitious practices imputed to contemporaries, its main purpose being to distinguish natural from supernatural phenomena (though by no means to deny the existence of the latter).

26. Le Brun, Pierre, R. P. *Lettres qui découvrent l'illusion des philosophes sur la Baguette et qui détruisent leurs systèmes.* Paris: Jean Boudot, 1693.

Written in the same spirit as his *Histoire critique*, these *Letters revealing the delusion of philosophers on the wand* discuss the much debated properties of the divining rod, a kind of wand contemporaries used (fraudulently or not) for water-witching, mineral prospection and, in the infamous Jacques Aymar affair, the tracking of murderers.

27. Lesser, Frédéric-Christian. *Théologie des insectes, ou démonstrations des perfectiones de Dieu dans tout ce qui concerne les insectes.* Trans. P. Lyonnet. The Hague: Jean Swart, 1742.

Another work of natural theology translated into French, comparable to that of Fabricius (above). The *Theology of Insects* attempts to reveal God's wisdom and power through the examination of insects.

28. *Mémoires pour l'histoire des sciences et des beaux arts [Journal or Mémoires de Trévoux], vol 35 (Oct-Dec 1735).* Paris, Claude Robustel, 1735.

One volume of the Jesuit-run *Journal de Trévoux* for which Castel worked as a 'science editor' for thirty years. This journal was one of the most influential of its day, containing critical reviews of recent publications in science writ large as well as letters and original pieces by its contributors. This particular volume, for October-December 1735, contains some of Castel's essays on his color-music theory. Although I chose not to include the whole of the *Mémoires de Trévoux* in my wish list (it comprises hundreds of volumes and is an unrealistic acquisition for the foreseeable future), it goes without saying I hope one day to own a complete set.

29. Nicolas, Louis, ex. s.j. *The Codex Canadensis and the writings of Louis Nicolas.* Ed. François-Marc Gagnon, Nancy Senior and Réal Ouellet. Montreal & Kingston: McGill-Queen University Press, 2011.

A beautiful facsimile of the drawings and writings of the defrocked Jesuit Louis Nicolas, who traveled and lived in New France in the seventeenth century; Nicolas was not a great artist, but his depiction of American animals and peoples have a wonderful, naïve charm.

30. Pardies, Ignace Gaston, s.j. *Oeuvres [...] contenant 1. Les Elemens de Géometrie. 2. Un discours du mouvement local. 3. La statique, ou la science des forces mouvantes. 4. Deux machines propres à faire les quadrans. 5. Un Discours de la connoissance des bêtes. Augmented edition.* Lyon: Bruyset, 1725.

Pardies is one of Castel's intellectual predecessors, and perhaps a source of inspiration for him. This compendium of his works gives a sense of the wide range of topics that fell within his ambit, such as geometry, mechanics and natural history. The discourse on animals' capacity to learn and think is particularly interesting.

31. Pierquin, Jean. *Oeuvres physiques physiques et géographiques de M. Pierquin, Bachelier en Théologie et curé de Chastel en Campagne, Avec la vie de l'auteur.* Paris: C. F. Simon, 1744.

Pierquin is one of the most obscure figures in my collection. This *curé* belonged to the category of provincial *curiosi* who had relatively little training in philosophy but felt comfortable sharing their ideas with the public by publishing in various journals. This miscellany of essays discuss a wide range of physical, geographical and religious topics, ranging from astronomy to witchcraft. One of Pierquin's idiosyncratic ideas was to modernize Thales's philosophy, a bit like the way Gassendi had revived Epicurianism. This work was reviewed in the *Mémoires de Trévoux*, possibly by Castel who appreciated these syncretic endeavors.

32. Pluche, Noël-Antoine, abbé. *Histoire du ciel considéré selon les idées des poètes, des philosophes et de Moïse. ou l'on fait voir 1. L'origine du Ciel Poétique, 2. La méprise des Philosophes sur la fabrique du Ciel & de la Terre, 3. La conformité de l'expérience avec la seule Physique de Moïse,* vol. 2 [vol. 1 missing]. The Hague: Jean Neaulme, 1740.

The Abbé Pluche's natural historical and antiquarian *History of the Sky* examines the constitution of the heavens from the perspective of ancient myths, and assesses those alongside Moses's account in *Genesis* 1. It belongs to the same category of work as those by Lafitau, Banier and others.

33. Pluche, Noël-Antoine, abbé. *Le Spectacle de la Nature, ou Entretiens sur les particularités de l'histoire naturelle, qui ont parues les plus propres à rendre les jeunes gens curieux, et à leur former l'esprit.* 9 vol. Paris: Veuve Estienne, 1732-1750.

One of the most popular books of the 18th century, found in just about every personal library, the *Spectacle of Nature* simply had to feature in mine. This is the French natural historical counterpart to the 'natural theology' tradition that thrived in Britain and the Netherlands. A nicely bound set with all of its original fold-out plates, it offers a pleasant display of the animal, vegetal, mineral and celestial realms, as well as a celebratory overview of the human world and its relationship with the divine.

34. Pluche, Noël-Antoine, abbé. *Concorde de la Géographie des différents âges.* Paris: Frères Estienne, 1765.

A posthumous work that establishes the *Concordance* of geographical names over the ages. An interesting sourcebook that once again highlights the ecclesiastics' widespread concern over connecting the past to the present.

35. Polignac, Melchior de, Cardinal. *L'Anti-Lucrèce: poème sur la religion naturelle*, Vol. 1 (of 2). Trans. Jean Pierre de Bougainville (includes a long *Discours préliminaire*). Paris: Hyppolyte Louis-Guerin, 1750.

Polignac's *Anti-Lucretius* is a famous Latin poem aiming to refute not only Lucretius but the Neo-Epicurians (Gassendists) and libertines of the early 18th century. This translation is by Jean-Pierre de Bougainville, brother of the famous explorer Louis-Antoine de Bougainville. The set is incomplete, but it includes a lengthy introductory essay by the translator.

36. Pomey, François, s.j. *Indiculus Universalis, L'Univers en Abrégé, où sont contenus en diverses listes, presque tous les Noms des Ouvrages de la Nature, de toutes les sciences, et de tous les arts, avec leurs principaux termes*. Lyon: Chez Horace Molin, 1695.

Encompassing the whole world within a single book: the Jesuits seem to have been fond of *Universal Indices*, which listed and categorized words from all sorts of domains and provided translations into Latin, for use in school.

37. Regnault, Noël, s.j. *L'origine ancienne de la physique nouvelle*, 3 vol. Paris: Jacques Clousier, 1734.

Regnault was one of Castel's fellow teachers at the Jesuit College of Paris. Like Castel, he wanted to make scientific knowledge accessible to his readers (hence the dialogue format of his *Ancient Origin of the New Physics*) and sought to bridge past theories with the novel theories of the modern.

38. Seeauer, Beda. *Philosophia Antiquo-Nova ad usum Juventutis Academiae Lucii publicae facta. In V. Tractatus divisa, Salsburg, Joannis Josephi Mayr, 1745*.

This rare textbook originally belonged in the Saint-Peters Monastery of Salzburg. It is the first acquisition of my collection and remains one of its most precious items. It consists in a complete introductory course of logic, metaphysics and natural philosophy, grounded for the most part in the Aristotelian corpus, contrasted with what was then the "new" natural philosophy.

39. Souciet, Etienne s.j. *Recueil des dissertations du Père E. Souciet, de la compagnie de Jesus, contenant un abrégé de chronologie, cinq dissertations contre la chronologie de Newton, une dissertation sur une médaille singulière d'Auguste*. Paris: Rollin, 1726.

Souciet was another one of Castel's colleagues at the Jesuit college of Paris; he was also the librarian of the college for many years and a reputed scholar of eastern languages

and antiquities in his own right. In this *Collection of Dissertations*, he specifically responds to Newton's chronological speculations.

40. Vallemont, Pierre Le Lorrain, abbé de. *La physique occulte, ou Traité de la Baguette divinatoire*, 2 vol. The Hague: Adrien Moetiens, 1762.

Occasionally mistaken for a Jesuit, the abbé de Vallemont was a *litterateur* and amateur botanist who lived at the court of Versailles at the turn of the 18th century. He was particularly interested in the occult sciences and wrote this *Treatise on the Divining Rod* in the wake of the famous Jacques Aymar affair. Le Brun (above) also participated in this debate.

41. Vallemont, Pierre le Lorrain, abbé de. *Curiositez de la Nature et de l'art sur la végétation ou l'agriculture, et le jardinage, dans leur perfection, ou l'on voit le secret de la multiplication du blé, et les moyens d'augmenter considérablement les revenus des biens de la campagne; de nouvelles découvertes pour grossir, multiplier et embellir les fleurs, et les fruits; une nouvelle manière de provigner facilement les arbres; plusieurs végétations singulières et admirables; et les merveilles de la palingénésie, ou la Résurrection des plantes*. Paris: Claude Cellier, 1705.

One of Vallemont's most important works and one that underwent several editions; it discusses the *Curiosities of Nature and the art of ... Agriculture*, revealing recipes and secrets for improved horticulture and gardening. The later chapters also discuss the mysterious procedure of plant palingenesis, the 'magical' resurrection of dead specimens from their ashes. Most of the contents of his book are second-hand, as Vallemont, like several of authors in my collection, was more compiler and synthesizer than inventor.

Scholarly Grafts:

Here is a selection of modern scholarship written by Jesuits that features at the periphery of my collection.

42. Campbell, Thomas J., s.j. *The Jesuits 1534-1921. A History of the Society of Jesus from Its Foundation to the Present Time*. New York: Encyclopedia Press, 1921.

The Company of Jesus is proud of its history and has consequently produced a number of first-rate (if not always impartial) historians throughout its history. This work is a classic example.

43. Dainville, François de, s.j. *L'éducation des jésuites (XVI-XVIII siècles)*. Paris: Editions de Minuits, 1978.

One of the pillars of the Company of Jesus was its role in the education of the European élite. All the Jesuits in my collection had some connection to the Jesuit college discussed in this important work of scholarship.

44. Desautels, Alfred R., s.j. *Les Mémoires de Trévoux et le mouvement des idées au XVIIIe siècle 1701-1734*. Rome: Institutum Historicum Societatis Jesu, 1956.

One of the rare studies on the early history of the Jesuit journal. A good resource for historians of 18th-century intellectual practices.

45. Melançon, Arthur et al, s.j. *Liste des Missionnaires-Jesuites Nouvelle-France et Louisiane 1611-1800*. Montreal: College Sainte-Marie, 1929.

A precious reference work containing a list and biographical information of all the known Jesuit missionaries who travelled to New France; it also includes sample signatures of these missionaries to facilitate paleographical investigation.

46. Teilhard de Chardin, Pierre, s.j. *The Phenomenon of Man*. Introduction by Sir Julian Huxley. London: Collins, 1959.

I find in Teilhard de Chardin echoes of early modern Jesuit natural philosophy. His theory of evolution sought to harmonize state-of-the-art science with his religious beliefs, and the result is beautiful, if scientifically and religiously unorthodox. One can easily draw a spiritual lineage from Kircher to Castel to Teilhard de Chardin.

Wish List:⁴

1. Castel, Louis-Bertrand, s.j. *Traité de physique sur la pesanteur universelle des corps, 2 vol.* Paris: André Cailleau, 1724.

The *Physical Treatise on Universal Gravity* is perhaps my favorite in the Castellian corpus. It is at once a journey through the celestial spheres, a natural history of gravity, a historical synthesis of ancient and modern physics, and an attempt to reconcile mechanical philosophy with free will.

2. Castel, Louis-Bertrand, s.j. *Optique des couleurs*. Paris: Briasson, 1740.

This is Castel's best-known inquiry into color theory. It contains a refutation of Newtonian optics and synthesizes his own research on color music, which he hoped to demonstrate on an instrument of his invention, the famous ocular harpsichord.

3. Castel, Louis-Bertrand, s.j. *Vrai système de physique générale de M. Isaac Newton, exposé et analysé en parallèle avec celui de Descartes, à la portée du commun des physiciens*. Paris: Sébastien Jorry, 1743.

This comparison between Descartes's and Newton's systems of the world actually attempted a detailed refutation of Newton's famous *Principia mathematica*. Although Castel stood, in retrospect, on the 'wrong side' of the debate, he writes a perspicacious

⁴ Excluded from this list are the missing volumes of texts already listed in the main bibliography. It goes without saying that those are on my priority list.

analysis in a style accessible to all. Like his other works, *Newton's True System of General Physics* testifies to the Jesuit's desire to bring complicated science within the reach of a literate audience.

4. Charlevoix, Pierre-François Xavier de, s.j. *Histoire et description générale de la Nouvelle France*. Paris, 1744.

Charlevoix was one of Castel's colleagues and rivals. His main works are historical in nature but he also had the distinction of having travelled to North America on a special mission tasking him to find the Northwest Passage. The account of his voyage, as well as his natural and moral history of New France, would make a lovely addition to my collection.

5. Daniel, Gabriel, s.j. *Voyage du monde de Descartes*. Paris, s.l.,1691.

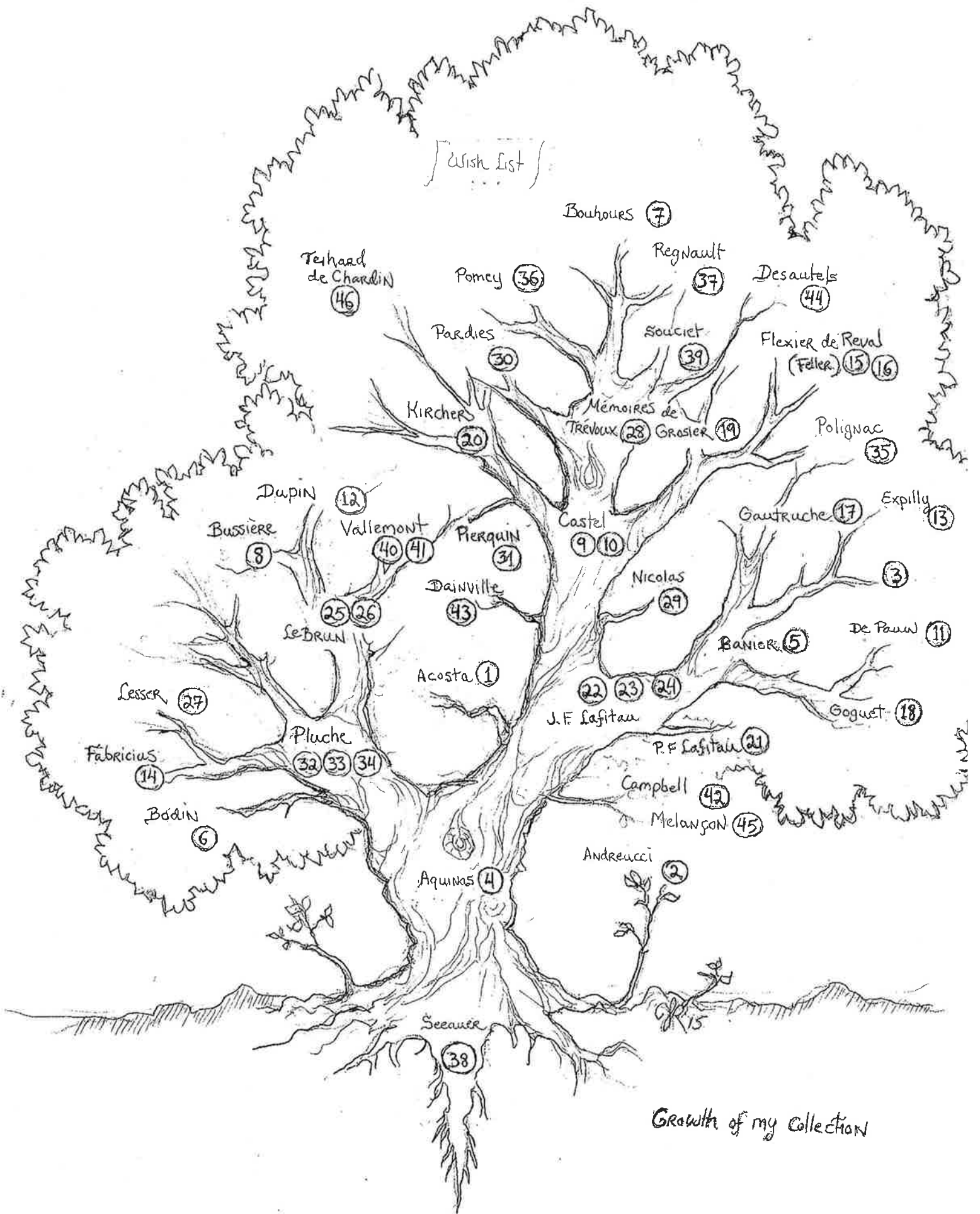
This fun philosophical treatise takes the form of a fictional *Voyage to the World* of Descartes, whose philosophical system Daniel playfully casts as the result of drug-induced delusions. In the second half of the 17th century, the Jesuits were for the most part opposed to the Cartesian system of the world, such that Daniel is to the Cartesians what Castel would be to the Newtonians.

6. Kircher, Athanasius, s.j. *Musurgia universalis*. Rome, 1650.

This is a collector's fantasy. Kircher's books are out of my price range, yet I would love to have one in my collection one day. The *Musurgia* would be a good fit, because the theory of universal harmony it advances inspired Castel's theory of color music specifically as well as influencing his overarching philosophical enterprise.

7. Regnault, Noël, s.j. *Les entretiens physiques d'Ariste et d'Eudoxe*, 3 vol. Paris, s.l., 1729.

This is the work that preceded Regnault's *Ancient Origins of the New Physics*. It features the same characters in dialogue and focuses on the teaching of mathematics, and therefore serves as a counterpart to Castel's attempt to popularize geometry.



Growth of my collection