

## From Comenius to Newton. The Chiliastic Nature of Pansophic Knowledge

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### Abstract

Comenius adopted the term "*pansophia*" to define a comprehensive system of knowledge drawn from the concordance between the senses, reason and divine revelation – a structure that recalls the threefold pattern of Isaac Newton's scholarship (his scientific research, alchemical experiments and biblical exegesis). Newton's conviction that there is a universal language for decrypting alchemical symbols, religious truths and the physical world alike is what enables us to describe his intellectual endeavour as pansophic. Besides, the eventual goal of human palingenesis which would usher in the Golden Age of the Millennium is what binds together the forerunners of true pansophism and Newton's scholarship.

**Keywords:** Comenius; Newton; Pansophism; Chiliasm.

### 1. INTRODUCTION

The first inchoate idea for this study originally came to me some years ago during my early stage of doctoral research, which was about unveiling hidden ties between Isaac Newton's alchemy and scriptural exegesis of the new Millennium. Approaching the great bulk of Newton's non-scientific documents and manuscripts effectively granted me the chance to consider and deepen his intellectual endeavour as a whole, which appeared in all its splendour as an epic, towering house of knowledge. I was on the outside looking in; yet it felt clear that each floor of that scholar mausoleum consisted of one field research of his and that very structure resembled the form of earlier comprehensive systems of knowledge. Still I was utterly convinced, as I am now, that sensing and establishing relationships in the form of cultural influences may lead intrinsically to the willingness of labelling them, holding thus sway over our approach in judging

them. From a structural point of view, the pattern of this essay wittingly recalls the logical outworking of the process that led me to define Newton's scholarship as true pansophy. Accordingly, the first part will develop some thorough, universal definition for pansophism that will trespass the time-boundary of John Amos Comenius' first explanation and usage of the term so to detect systems of knowledge that did not dare to define themselves as such. The second section will proceed to juxtapose those similar matrices of ideas, whose philosophic hinges stood out as peculiarly pansophic, built yet to meet an identical end – that is, the true knowledge of God and an invocation for mankind's redemption. While investigating the ultimate scopes chased after by pansophic knowledge, this paper will explore, in its conclusive part, the role played by chiliastic doctrines in the evolution of modern pansophism sensibly fostering that the theoretical hook that bound together the forerunners of true pansophism and Newton's scholarship was an eventual goal of human palingenesis, redemption and salvation that would lead man to usher in the Golden Age of the Millennium.

## 2. FOR A UNIVERSAL DEFINITION OF PANSOPHISM

Before gaining momentum in intellectual history with Comenius' encyclopaedic endeavour, the term "*pansophia*" headlined two little known works of similar subject: Petrus Lauremberg's *Pansophia, sive pædia philosophica* (1633) and *De omni scibili libri quadraginta: seu prodromus pansophiæ* by the Paduan humanist Bartolomeo Barbaro, this latter probably written during the years Barbaro spent at the court of João III in Lisbon and Evora (middle of the sixteenth century). Possibly due to its etymological derivation (from the Greek *pan-sophos*: all-wise; all-skilled; full of wisdom), the term "*pansophia*" was thereby to indicate some vast, synoptic compendium of human knowledge, still with no alleged reference to any principle of intellectual unification (VASOLI, 2005). Unexpected though as it might be, the theosophical ambition of modern pansophism – that is, how to overcome fragmentary knowledge of natural philosophy – revealed itself to Comenius in the form of Rosicrucian beliefs (SCHULER, 1980) during the second decade of the seventeenth century, setting thus the bar for everything else that was to follow early on. In that very syncretic process, which reached out to an all-embracing world-view, some peculiar place was occupied by the Rosicrucian work *Speculum Sopicum Rhodo-Stavroticum* published in 1618 by Theophilus Schweighardt Constantiens, pseudonym of the German physician and alchemist Daniel Mögling. The volume contained a whole section entitled *Arbor pansophiæ*, whose direct reference to the holiness of the Fraternity set noticeably afoot a grace-endowed quest for unearthing and beholding man's perfection in this world, actually fueling and prompting the reconciliation of the encyclopaedic formal significance of "*pansophia*" with its godly, spiritual tune, which unlocked the way to Comenius' utopian pansophism as "pedagogic integration of science and religion" (SHKLAR, 1981: 282; SPIELVOGEL, 1987).

Subsequent to the publication of his pedagogical treatise *Janua linguarum re-serata* (1631), which granted him fame and international recognition, Comenius endorsed, in 1639, the second edition of a personal letter of his, previously published with no authorisation by the addressee Samuel Hartlib, with the title *Pansophiæ prodromus*; even with subtle hints about his fancied pansophic project, it soon became the manifesto of a revolution in education, pedagogy, and human understanding of nature. From whatever point of view we may consider it, the comprehensiveness of Comenius' all-embracing system of knowledge was undoubtedly drawn from a concordance between the senses, reason and revelation, ultimately lowering the status of each single field therein when considered separately. Thus, the senses ought to provide an inductive understanding of nature, reason a knowledge of innate principles, revelation an interpretative guide to the Scriptures because, as Matthew Spinka put it, "since all three [...] derive from God, they must necessarily be capable of being harmonized with each other" (SPINKA, 1953: 156), so to obtain omniscience. What secret ambition lay at the core of such task certainly represents one of the most challenging feature of Comenius' criticism and questions do all boil down to the very nature of that unnamed desire.

Following up on his encyclopaedic organisation of human knowledge by proving it useful to all people of all nations, Comenius envisaged some universal, reformed educational system meant to provide easier teaching and invigorated learning of that pansophy he elaborated. Such pioneering ideas in the field granted him the status of first modern pedagogue. In a study dated 1957, "The significance of John Amos Comenius at the Present Time", Jean Piaget, then Director of the International Bureau of Education, had the reader confronted with difficulties arising when treating "an author of 300 years ago as modern" (PIAGET, 1993: 173); such snags possibly instigating extreme judgments. Coming to duly terms with an overall evaluation of Comenius' thinking, Piaget sensibly ascribed his modernity "to the creation of a science of education and a theory of teaching, considered as independent disciplines" (PIAGET, 1993: 187), anchoring Comenius' contemporary significance "to the axes of his system" that would imply "a modern point of view to bear upon the system as such" (PIAGET, 1993: 177). Venturing yet beyond his pedagogical achievements, and following Piaget's plea (SPINKA, 1953: 164), one scholar's aware eye should not but acknowledge that Comenius' most valuable intellectual outcome was his honest, undisguised integration of religion into general scientific culture, by advocating wisdom as overriding ambition of his pansophic syncretism, which foreran, and in some way allegedly hastened, Isaac Newton's synthesis of the doctrine of the "Two Books". Inasmuch as the very broad and general notion of "*pansophia*" may be established and further developed as "pansophic knowledge", this ultimately implies for the intellectual fields therein encompassed and abridged to be held together by the core of the subject-matter itself – that is, to obtain true knowledge of God. As premise to any additional discourse on the intellectual pillars of pantology and its either introspective or outrospective gnoseological stance, some considerations about XVII century beliefs on the divine nature of God seem overdue.

The *General Scholium* to the *Principia* (1687) indisputably represents the blending of Newton's scientific theism and natural philosophy and it is the *locus classicus* (MCCALLA, 2013: 50-56; POPKIN, 1988a; SNOBELEN, 2005) of his acquaintance with the pristine creed of the 'Two Books' and God's immanence in the physical world – the latter proven to be of Hermetic derivation according to a comparison between Newton's statement that in God are "*all things contained and moved*" (NEWTON, 1999: 941; NEWTON, 1972: 761) and some lines from Hermes' *Tabula Smaragdina* which bolster that "*all things have been & arose from one by ye mediation of one*" (DOBBS, 1991: 274). In the same passage, Newton outlines his proofs for God's existence, advising the reader that God is "*eternal and infinite, omnipotent and omniscient, that is, he endures from eternity to eternity, and he is present from infinity to infinity; he rules all things, and he knows all things that happen or can happen. He is not eternity and infinity, but eternal and infinite [...]. He endures always and is present everywhere, and by existing always and everywhere, he constitutes duration and space*" (NEWTON, 1999: 941; NEWTON, 1972: 761). Interestingly enough, the aforementioned excerpt equals, both in lexical and philosophical terms, some lines from the *Poimandres*, Treatise XI, where the Nous theologically addresses Hermes in an attempt to establish relationships between God and eternity, cosmos, time, and becoming: "*The source of all things is god; eternity is their essence; the cosmos is their matter. Eternity is the power of god, and the cosmos is eternity's work, but the cosmos has never come into being; it comes to be forever from eternity. Therefore, nothing in the cosmos will ever be corrupted (for eternity is incorruptible), nor will it pass away since eternity encloses the cosmos. - But the wisdom of god - what is it? - The good and the beautiful and happiness and all excellence and eternity*" (COPENHAVER, 1992: 304).

Perchance in pursuit of a theosophical reconciliation that would herald spiritual renovation for humankind to usher in the Golden Age of the Millennium at hand, Comenius eagerly embraced the term "*pansophia*" to encapsulate the Hermetic world-view of man being a sentient embodiment of the Holy, shielding 'a spark of divinity within' (SPIELVOGEL, 1987: 195; TILLYARD, 1972; BAMBOROUGH, 1952; LOVEJOY, 1960). Indeed, he advocated (VASOLI, 2005) resemblances between the inner microcosm and the outer physical world, "*for all the inferior things have their natural inclination from the superior, God being above all in his will*" (NEWTON, Keynes Ms. 22: f. <12v>, 24). Accordingly, God and the Cosmos were to be experienced and hence dominated through the means of science, which, as Dorothy Stimson bluntly observed, was to Comenius knowledge (STIMSON, 1935: 382). Promising yet more than he eventually delivered, Comenius believed that Hermetic wisdom held out much hope for a new synthesis of religion and science that would come to secure universal peace (SPINKA, 1953: 157; BLAIR, 2000; HARRISON, 2007). Pretty much in that sense, and effectively carrying through with Comenius' *didactica*, Newton plunged in the depths of mechanical rationalism, bathed in it and surfaced up eventually to engineer a system of the world in accordance to his physical laws moved yet by, and tending to accomplish, God's will. Seamlessly incorporating his influences with as much deft precision as ever, Newton spawned a system of universal knowledge whose threefold pattern – the scientific research, his alchemical quest (SHERWOOD TAYLOR, 1956: 62) and biblical exegesis – evokes

the three principles whereupon Comenius' system rested – sense, reason and Scripture: “*That Philosophie may be reformed and perfected, by an harmonical reduction of all things that are and are made, to sense, reason and Scripture, with so much evidence and certainty... that any mortal man seeing may see, and feeling may feel, the truth scattered everywhere*” (BLAIR, 2000: 40). Hence, acknowledging that his heterogeneous matrix of knowledge could be sensibly labelled as “pansophic” would ease the tricky task of plumbing what James E. Force described as “the synthetic unity in Newton’s thought” (FORCE, 1990: 75), allegedly and hopefully avoiding any reductive reading based on a hierarchically ordered, somehow Scholastic, conception of culture (DOBBS, 1991; FAUVEL et al., 1988; WESTFALL, 1982; FORCE, 1990; FORCE, 1999a; SNOBELEN, 2004).

Regardless of their epoch, cohesive bodies of knowledge could therefore be referred to as “pansophic” insofar as they aim at encompassing all hues of natural philosophy making the two ends of its spectrum dovetail – that is, religion and science, at least in the positive conception of the latter. To this extent, the term “*pansophia*” shall become a universal definer for philosophical systems that bear out their enduring identity of composite matrices of ideas and substantially outlive the crumbling of philosophical boundaries of early forerunners. Making up considerably for Comenius’ shortcomings and systemic discrepancies, Newton’s unrivalled venture does represent the crowning milestone of a natural philosophical journey of pansophic understanding of the world undertaken by means of alchemical symbolism as key to scriptural exegesis – a perfect (DOBBS and JACOB, 1995: 12), yet unfulfilled, *scientia integralis*.

### 3. PANSOPHIC LANGUAGES TO FORETELL DOOMSDAY

Isaac Newton’s peerless achievements in the vast fields of science were actually counterbalanced by the temporal discontinuity of his scientific commitment (WESTFALL, 1987; SHEA, 1975); in fact, two other lines of investigation (MCGUIRE and RATTANSI, 1966: 108) occupied him throughout his central years: an abiding, consuming interest in alchemy (DOBBS, 1982: 521; WESTFALL, 1975: 195) and some heretical, Machiavellian commitment to theological studies (POPKIN, 1988a; SNOBELEN, 2004). Each of these two branches of knowledge certainly represents one facet of Newton’s intellectual prism, consistently bound to refract the light of his thought according to the position we allow them to occupy.

In a pioneering study dated 1967, Mary S. Churchill identified the two-fold nature of alchemy – the *chrysopeia* and its mystical, religious counterpart – as the key to comprehend Newton’s unabated interest in the *Ars Regia*; likewise, she argued, these two aspects were to be appended to Newton’s thought, thus assuming a moral dimension to his laboratory activity. Some years later, Betty Jo Teeter Dobbs endorsed Churchill’s hypothesis claiming that a religious interpretation might satisfactorily represent the reading key to Newton’s endeavour as a whole, the knowledge of God being his eventual goal (DOBBS, 1991). At an equal rate, Arthur Quinn proved Newton’s biblical hermeneutics to be the most

sparkling jewel of his intellectual crown by averring that Newton himself “would have us read his own work in terms of its role in the salvation history described in the Bible” (QUINN, 1988: 187). The clue to such criticism is Newton’s utter, unshakable conviction in a universal language apt to decrypt alchemical symbols, religious truths and the physical world alike. This abiding *credo* of his enshrines the belief that scientific laws, alchemical texts and the Bible were all natural pages encoding God’s message and that only a syncretic study of these three glosses could avenge, as prophesised in *Daniel 1:1-7*, Babel’s confounding of speech and eventually regain the Edenic language of *Genesis 11:1-9*. Resemblances between the unintelligible obscurity of the prophetic message and the cryptic nature of alchemical symbolism must have thus unravelled to Newton in the form of linguistic patterns aimed at disclosing identical meanings. Some lines from Keynes Ms. 5 do acquaint us satisfactorily enough with Newton’s own explanation of such theory: “He that would understand a book written in a strange language must first learn the language & if he would understand it well he must learn the language perfectly. Such a language was that wherein the Prophets wrote” (NEWTON, Keynes Ms. 5: <Ir>). Newton broaches here explicitly the uniqueness of the divine idiom, which is the only one that would prompt man to comprehend the natural pages of the “Two Books” – the first he already strove to decode by means of scientific formulae, the latter he would thoroughly probe by an exegesis of the Prophets’ language. Due to its two-fold nature, alchemy per se allowed a syncretic study of the “Two Books’ and this may reasonably explain Newton’s life-long interest for *chrysopeia* and alchemical philosophies alike. Moreover, chiasm and alchemy shared an eventual goal of human palingenesis and salvation (CRISCIANI, 2008) as recounted in *Revelation 21:4*, where John’s vision of the New Jerusalem hastens humankind’s redemption on doomsday: “And God shall wipe away all tears from their eyes; and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain: for the former things are passed away.”

In his *Commentarius* to Hermes Trismegistus’ *Tabula Smaragdina*, Newton remarked that through alchemical praxis “all obscurities and all need and grief will flee from you” (DOBBS, 1991: 277), seemingly echoing John’s revelation and confirming that hermetic philosophy of nature was pivotal to the revival of messianism throughout XVI and XVII centuries (KATZ and POPKIN, 1998). Hermeticism indeed offered natural paths to tread and fostered (delusional) opportunities of metaphysical renewal to regain the Edenic domination over nature that man mastered before the Fall, forerunning the alchemical law of “no generation without prior corruption” (KLOSSOWSKI DE ROLA, 1988: 126) and sanctioning the biblical progress from decay to growth and from death to resurrection of *John 12:24*: “verily, verily, I say unto you, except a corn of wheat fall into the ground and die, it abideth alone: but if it die, it bringeth forth much fruit” (see also I Corinthians 15:36-38).

Conversely, Comenius hankered after the overcoming of the Babel-like confusion by means of a common language that might improve interpersonal communication, promise universal education, and grant peace on Earth (WOLDRING, 2016); remarkably, what clearly sets Comenius’ pansophy apart is the salvationist ambition of its educationalist mission as intensely expressed in his *Via Lucis*

(1641-1642; published 1668). In such sense, Comenius and Newton (NEWTON, Yahuda Ms. 1.1: f. <8r>) trod the path opened up by the Cambridge Platonist Joseph Mede, the “‘dean’ of English Millenarianism” (POPKIN, 1988b: 5; Firth, 1979; Popkin, 1992), whose *Clavis Apocalyptica* (1627; first English translation to appear posthumous in 1643) “offered a different interpretation of the book of Revelation grounded upon its linguistic structure” (EDWARDS, 1977: 5; MURRIN, 1984), according to which humankind’s redemption shall come along with the restoration of the original meaning and generative force of God’s Word of Life as in *John 1:12-14*. Plainly as we may put it, Comenius and Newton widely shared the millennial expectations pervading the society and formally endorsed the biblical precept expressed in *Daniel* that, as the end of time approaches, knowledge shall increase, the righteous will understand, whereas the wicked will not (POPKIN, 1988b: 5; MAXWELL-STUART, 1999: 202; LINDEN, 1996):

“I would not have any discouraged by the difficulty & ill success that men have hitherto met with in these attempts. This is nothing but what ought to have been. ffor it was revealed to Daniel that the prophesies concerning the last times should be closed up & sealed untill the time of the end: but then the wise should understand, & knowledg should be increased. Dan 12.4, 9, 10. And therefore the longer they have continued in obscurity, the more hopes there is that the time is at hand in which they are to be made manifest. If they are never to be understood, to what end did God reveale them?” (Newton, Yahuda Ms. 1.1: <1r>)

On the one end, Comenius’ perfect language was meant to speed the advancement of human knowledge (DEMOTT, 1955), on the other, Newton’s rediscovery of the *prisca theologia* was a crucial sign of the beginning of the very last age trumpeted in the Scriptures (QUINN, 1988; POPKIN, 1988a). Indeed, intellectual historians handed down an evolution of pansophic philosophies that hinged upon a revolution in language teaching and fostered exegetical techniques to recoup the perfection of the mourned-after Edenic Word (DEMOTT, 1955); following the lead of a redeeming universal language, Newton and Comenius conjured up eschatological discourses that perfectly fitted in the general framework of an increasing contemporary chiliastic debate and resonated as ultimate scope chased after by pansophic knowledge.

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