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*A hypothesis on the occasion of the Dialogues
concerning the natural religion of David Hume*

The present study intends to propose as the original occasion of the composition of the *Dialogues concerning Natural Religion* a historically precise and circumstantiated polemic involving Colin Maclaurin, Andrew Baxter and David Hume, just as the Dialogues confront Cleanthes, Demea and Philo. The materials of this controversy are: *An Account of Sir Isaac Newton's Philosophical Discoveries*, published in 1748, two years after the death of Maclaurin, *An Appendix to the First Part of the Enquiry into the Nature of the Human Soul* which appeared shortly after the death of Baxter, which occurred in April 1750, and, of course, the *Dialogues* themselves, which we know with certainty were not composed before 1749, and which were entrusted to the reading, of a relevant part, of the friend Sir Gilbert Elliot of Minto from a letter from Hume dated 10 March 1751 and completed in the same year or in the years immediately following.

It is necessary to remember that the identification of Hume with the sceptical Philo - suggested largely, but not entirely by the text - substantially requested by authoritative scholars, but certainly not universally shared, led to an increasingly mediated reading of the *Dialogues*, which risks making the problem of identifying the characters appear archaic; that the identification of Maclaurin with Cleanthes was proposed by R.H. Hurlbutt in the well-known *Hume, Newton and the Design Argument*, but in a more attenuated form; that no one, I think, compared Baxter's positions with those of Demea. It also requires a clarification: I do not intend here to completely identify Cleanthes with Maclaurin and Demea with Baxter; but searching in their

texts for the initial suggestion and the constant ground of control for the literary invention of the characters and contrasts illustrated in the *Dialogues* involves a difference with respect to the usual survey of the "probable prototypes" of Hume: for a certain stretch (for the first nine of the twelve parts) the *Dialogues* can be commented on in terms of Philo-Hume, Maclaurin-Cleanthes, Demea-Baxter, without making too much of a leap, as the literary invention is historically legitimized by these personalities, who were actually spokespersons for competing cultural perspectives.

1. The historical polemic and the alliances of the «Dialogues».

At the end of Part III of the *Dialogues* there is a passage on Neoplatonic mysticism that seems to guarantee, beyond reasonable doubt, that Hume had read Maclaurin's *Account*. In addition to this, Hurlbutt reports two parallel passages and numerous common themes between the *Account* and the *Dialogues* to argue that Philo's polemic against Cleanthes has as its target experimental Newtonian theism, of which Maclaurin is an exponent¹. But the passage deserves more. In fact, it is placed in the mouth of Demea and one cannot understand why Hume, with all the mystics available - English and Scottish - must steal in the home of a sober and practical man like Maclaurin. The paradox is eliminated, if one clearly distinguishes the problem of the historical sources of the argument from that of the identification of the characters. We will then realize that the most interesting part of the passage is not the identical part, but that which, keeping the syntactic structure almost unchanged, overturns the sense of Maclaurin's discourse, through the use of contrary terms. Maclaurin introduced the controversy against neoplatonic mysticism to neutralize those interpretations of the *Scholium generale* of Newton's *Principia* which, in his opinion, distorted the relationship between God and the universe, subordinating physics to metaphysics. His controversy culminated in the condemnation of Baxter's thesis. On the other hand, Demea, in the first head of this intervention in which he assumes the defenses of neoplatonic mysticism, neutralizes with his objections the example of

¹ See R.H. Hurlbutt, *Hume, Newton, and the Design Argument*, University of Nebraska Press, Lincoln 1965, pp. 40-42 and 141-44.

the book-animal that Cleanthes proposed in support of the proof of order. The example did not appear in Maclaurin's text; it appeared instead in Baxter's texts, which criticized the way Maclaurin defended the proof of order. Demea (i.e. Baxter) steals Maclaurin's words to use them against him. Cleanthes (i.e. Maclaurin) subtracts his example from Baxter to support his theses. It is the experimented technique of the most common libellistic. But, in order to make this reconstruction convincing, it is convenient to resume the terms of the controversy².

In the *Inquiry into the Nature of the Human Soul* (1733), moving from the inertia of matter, conceived as resistance to motion, Baxter takes up Newton's argument, but above all those of Samuel Clarke, on the impossibility of a mechanical explanation of universal gravitation, and also applies the same argument to the phenomena of cohesion, of elasticity, of blood circulation, of reproduction, etc., so as to assert the exclusive and immediate divine efficacy (and, subordinately, of the spiritual beings); the sections dedicated to the immortality of the soul and the contingency of matter are also substantially Clarkian, in contrast with the necessity of the divine nature; more original, however, is a section on the immaterialism of Berkeley, who is perceived as an annoying competitor, refuted with common sense, with the emphasis given to the solipsistic consequences of the system and with the contrast between materialism and immaterialism. Finally, there is a very singular essay, in which Baxter argues, against ancient and modern thinkers, that dreams do not have a mechanical or

² Given the nature of this work, I immediately point out the works I compare: C. Maclaurin, *An Account of Sir Isaac Newton's Philosophical Discoveries*, London 1748 (of which there is a facsimile edition, with the introduction of L.L. Laudan, Johnson Reprint Corporation, New York and London 1968) that I will mention as *Account*; A. Baxter, *An Inquiry into the Nature of the Human Soul; wherein the Immateriality of the Soul is evinced from the Principles of Reason and Philosophy*, London 1733, *Matho, or the Cosmotheoria Puerilis. A Dialogue in which the First Principles of Philosophy and Astronomy are accommodated to the Capacity of the Young Persons, or such as have yet no Tincture of these Sciences. Hence the Principles of Natural Religion are deduced*, 2 vols, London 1745; *An Appendix to the First Part of the Inquiry into the Human Soul*, London 1750 (henceforth referred to as *Enquiry, Matho, Appendix*); finally, I will quote as DIA, [page and line](#), the recent critical edition of D. Hume, *Dialogues concerning Natural Religion*, edited by J.V. Price, preceded by *The Natural History of Religion*, Clarendon Press, Oxford 1976. For the passage on mysticism, cf. DIA, p. 179, 14-25 and *Account*, pp. 378-79. For the example of the book, see *Enquiry*, p. 265 and *Appendix*, p. 168

psychological explanation, but derive directly from some spiritual agent (and he often tends to see the influence of evil spirits, probably due to certain distressing personal experiences - thus giving philosophical dignity to one of the most deeply rooted beliefs in Scottish popular religion). Reprinted in 1737 and 1745, the work received the unconditional praise of Warburton, the pretentious opponent of Hume. Next to it was *Matho: or, the Cosmotheoria puerilis*, a sort of 'Newtonianism for boys', in the form of a dialogue, which from the sixty pages of the first Latin edition (1738) reached in the second English edition of 1745 almost eight hundred pages, full of astronomical speculations and calculations of planetary orbits.

If Hume had already criticized Clarke's thesis on the immortality of the soul and accused of impiety the doctrine of the sole and universal divine efficacy in the *Treatise* of '39, in the *Philosophical Essays* of '48, asks, very disappointedly, why this doctrine has "become so prevalent among our modern metaphysicians", seeing that "Malebranche and other Cartesians' had 'no authority in England". He discusses the "*vis inertiae* which is so much talked of in the new philosophy": it must be considered as a fact, like gravity, without any understanding of the power on which it depends; the cautious hypothesis of "an active ethereal matter" shows that Newton had never intended "to rob the matter of all power or energy"; also Locke, Clarke and Cudworth had always attributed to matter a "real though subordinate and derived power". These metaphysicians "diminish, instead of magnifying, the grandeur of those attributes, which they affect so much to celebrate"; this theory is "too bold" for "the weakness of human reason", it transports us to a "fairy land" and "leads to conclusions so extraordinary, and so remote from life and common experience"³.

³ D. Hume, *An Enquiry concerning Human Understanding*, Clarendon Press, Oxford 1963, pp. 71-73 and note (but I take into account the variations of the first edition of 1748, which was entitled) On the subject I refer to my *Lord Kames, James Stewart e le leggi del moto*, in *Scienza e filosofia scozzese nell'età di Hume*, Il Mulino, Bologna 1976, (pp. 75-109), p 100 and note.

A professor in Edinburgh thanks also to the concrete support of Newton himself, Maclaurin had tried to dampen the enthusiasm for the philosophy of Berkeley in the *Rankenian Club*, he had instead lavished on extending the practical and scientific interests of the Medical Society. He had distinguished himself by organizing the defence of the City of Edinburgh at the time of the Jacobite uprising. It is not necessary to examine the common sense leaning with which he deals with the foundations of mechanics and physics, adopting a markedly empirical line, to avoid the reification of the mathematical entities that had favoured the criticism of Berkeley and opened the field to the freer physico-theological speculations. His aversion to metaphysics should be followed, however, in the historical introduction proposed in the first book of the *Account*, which incorporates the hegemonic design on the whole philosophy already present in Newton and early Newtonians: after a general discussion on Newton's method and on his system of the world, Maclaurin opposes to the sterile inventions of the ancient philosophers the 'prisca sapientia' ('copernican' and gravitational conception of the universe); there follows a chapter on modern philosophers, in which Copernicus, Kepler, Galileo, and Bacon stand out as precursors of Newtonian synthesis; of opposite sign is the next chapter, dominated by Descartes, a negative hero of modern metaphysical thought and corrupter of the true philosophical method, and by his worthy disciples Leibniz and Spinoza. This Manichaean perspective is resumed in the final chapter and results in a drastic judgment, which links the continental errors to the disputes of Edinburgh:

We have seen, in the foregoing account of the state of philosophy in different periods, that they who have indulged themselves in inventing systems and compleating them, tho' they have sometimes set out in a manner that has appeared plausible, yet, in pursuing those schemes, such consequences have arisen as could not fail to disgust all but such as were intoxicated with the deceit. [1] Some, from their fondness to explain all things by mechanism, have been led to exclude every thing but matter and motion out of the universe:[2] others, from a contrary disposition, admit nothing but perceptions, and things which perceive; [3] and

some have pursued this way of reasoning, till they have admitted nothing but their own perceptions. [4] Others, while they overlook the intermediate links in the chain of causes, and hastily resolve every principle into the immediate influence of the first cause, impair the beauty of nature, put an end to our enquiries into the most sublime part of philosophy, and hurt those very interests which they would promote. In framing those systems, he who has prosecuted each of them farthest has done this valuable service, that, while he vainly imagined he improved or compleated it, he really opened up the fallacy, and reduced it to an absurdity. Many who suffered themselves to be pleased with *Des Cartes's* fable, were put to a stand by *Spinoza's* impieties. Many went along with Mr. *Leibnitz's* scheme of absolute necessity, but demurred at his *monads* and *pre-established harmony*. And some, willing to give up the reality of matter, could not think of giving up their own and other minds⁴.

The reference to Berkeley is unequivocal in point 2 and quite clear the reference to Hume in point 3. In the concluding chapter of the volume, which commented on the general scholia of the *Principia*, the distinction between first cause and secondary causes is reiterated and the accusations against Baxter (point 4) are clarified: 'they hurt those very interests which they appear so sanguine to promote' 'representing' 'as imaginary and fictitious' 'the most sublime part of our philosophy'⁵- a remarkable point, in which the accusation of scepticism is clear. Furthermore, a letter from Maclaurin to Hoadly is inserted in the volume, in which the errors of reasoning are underlined and corrected with which Baxter, in the *Matho* dialogue - explicitly mentioned - claimed to change the data credited on the solar parallax, unless a capital error occurred in the Newtonian theory of lunar motions⁶.

Attacked in his scientific and religious reputation in the face of that half of Europe destined to welcome the Newtonian's scientific

⁴ *Account*, p. 95.

⁵ *Ibid.*, p. 389: they who hastily resolve those powers into immediate volitions of the supreme cause, without admitting any intermediate instruments, put an end to our enquiries at once; and deprive us of what is probably the most sublime part of philosophy, by representing it as imaginary and fictitious: by which means, as we observed above, they hurt those very interests which they appear so sanguine to promote;

⁶ See *ibid.*, pp. 335 ff., *Matho*, II, pp. 348 ff., *Appendix*, pp. 238 ff.

testament of Edinburgh, in each of the eight sections of the *Appendix* Baxter faithfully reproduces one or more passages of the *Account* and denounces errors, ambiguities and contradictions of the adversary, dedicating half of the two hundred and eighty pages to criticizing Maclaurin's commentary on Newton's *Scholium*. He reproduces the passage I have just quoted, "because the censure extends to others" - which is a request for solidarity and an implicit invitation to new pamphlets - and appeals to the judgment of "those who have considered the three different systems here mentioned", to know "whether the First Part of the Enquiry into to the nature of human soul, deserved to have been ranked in such company"⁷. In comparing his own theses with those of Maclaurin, he also asks "the intelligent reader" to "determine whether the principles laid down in the first part of the *Enquiry*, or those substituted" in the final chapter of Maclaurin, "concerning the government of the material universe, be most conformable to truth. This liberty I expect others will take with me, and I do not refuse it"⁸.

Hume would have taken many liberties with Baxter if the identification with Demea is right. Surely not even the analyst of the human mind was to be pleased that his refined metaphysics was confused with the extreme, ridiculous physico-theology of someone like Baxter. Nothing was farther from his temper than the idea of public polemics - let alone, then, if with a deceased author. With the positive scientist's superiority, Maclaurin seemed to use Hume's arguments against Malebranche to condemn Baxter and Baxter's arguments against Berkeley to condemn Hume. Why not give a taste of his own medicine, by really allying with Baxter? Why not enter the contest at least ideally and let the adversaries steal the arguments from each other, distorting their meaning and intention?

The *Dialogues* scene presents many similarities with this reconstruction: the "accurate philosophical turn of Cleanthes" fits perfectly with Maclaurin, who insists everywhere on the "utmost caution" of Newton and on the extreme "accuracy" of his science, as well as "the rigid inflexible orthodoxy of Demea" fits very well with Baxter, who denounces the hypocritical religiosity of the adversary.

⁷ *Appendix*, pp. 18-19.

⁸ *Ibid.*, pp. 102-103.

Baxter being a private tutor, the representation of Cleanthes as a preceptor and Demea as an educator of one's children can be a logical and prudent transposition. If, then, the author of *Matho* advocated the idea that the boys of eleven-twelve became accustomed "to the contemplation of truth and the study of nature, rather than the study of words only"⁹ and, in the *Inquiry*, moved from inertia of matter to conclude on the divine nature, Demea's proposal to postpone the study of theology to the study of science appears quite natural¹⁰.

With a hint of perfidiousness, but also with a certain candour, Baxter had immediately taken advantage of an unwise quotation from the pseudo-Aristotelian *De mundo* ('Aristotle concludes his treatise *De Mundo*, with observing that to treat the world, without saying any thing of its Author, would be impious;...) with which Maclaurin opened the commentary on the Newtonian *Scholium*, to observe that 'it seems too late to speak of the *contriver* and governour of the world, at the end of our enquiry into his works, that 'to discover the Author of these works and his perfections, is the only justifiable *end* one can think of, for inquiring into the works of nature' and that dwelling on the cause, when the effects are no longer in sight, can certainly 'serve to keep up the *Aristotle's form*', but not to achieve 'so familiar a conviction' that the divine "power and wisdom are best seen, while we are considering the effects they produce'. In this way he insinuated that, not an authentic religious spirit, but the desire 'merely to be reckoned learned' inspired the investigation and the text of the adversary¹¹.

Respecting the rules of the game imposed by the drastic judgment of Maclaurin, Hume - with greater perfidy - turns his accusation on Baxter. Philo, in fact, interrupts the pedagogical recommendations of Demea, asking if he really provides "so late" to the religious instruction of his children, causing him to immediately discover the sceptical cards and the real edifying purposes of his method.

⁹ *Matho*, I, p. 1.

¹⁰ Do not get me wrong, however, because I do not intend here to reduce the historical and ideological context of the *Dialogues* to the wiles of a private revenge; the four-year study plan recommended by Demea immediately transports us from Cleanthes' library to the deep transformations of the Scottish university and the pedagogical discussions that flourished in those years. On the context of the *Dialogues*, see the highly informed study by G. Carabelli, *Hume and the rhetoric of ideology*, La Nuova Italia, Florence 1972.

¹¹ *Appendix*, pp. 103-105.

Reassured, Philo transforms the aforementioned judgment of Maclaurin into an alliance with Demea and in a lively provocation towards Cleanthes. Through the Baxterian motif of *scientia inflat*, he turns the thesis on the opposite religious consequences of little and much knowledge, which inspires the historical introduction of the *Account*, according to the "excellent saying of Bacon", quoted by Maclaurin and punctually recalled, some pages below, from Cleanthes¹². Finally, he joins the criticisms of Berkeley and Hume on the foundations of science with those of Baxter on cohesion.

Of the subsequent discussion on scepticism - the central theme of Part I of the *Dialogues* - it is interesting here to justify the intervention of Cleanthes. Regarding practical scepticism, if Hume lends much of his own to the adversary, it is also true that similar arguments were already proposed by Baxter against Berkeley, when he was ridiculing his position by translating the law of accelerated motion into the language of ideas¹³. Regarding speculative scepticism, Maclaurin, like Cleanthes, admits that the principles of science are "the most familiar" and of "common use"¹⁴, but recognizes the abstruse character of many principles of mechanics or the paradoxes of the Copernican system¹⁵. Still like Cleanthes, he grants the difficulties related to the notions of space, time, motion (and causality) and provides an evasive answer; in a nutshell, he refutes the quibbles of the sceptics «by illustrations, examples, and Instances, rather than by the serious Argument and Philosophy»¹⁶, using easy examples and invoking common sense¹⁷.

¹² See DIA, pp. 156,23 -157,1 and *Account*, p. 59.

¹³ See DIA, pp. 148,31-149,1 and *Enquiry*, pp. 315-16.

¹⁴ *Account*, p. 19; cf. DIA, pp. 154,16-28, 155,7-10, but also see how Philo used this admission against theology (p.151,22-23).

¹⁵ See *Account*, pp. 44-46, 183, 288, 291, 323, 390.

¹⁶ DIA, p. 173,13-15 (Part iii).

¹⁷ On the tendency of Maclaurin to solve the difficulties of sceptics and metaphysics by means of exemplification, pp. 97-99 of the *Account*, in which the problems of the existence of the external world, of the primary and secondary qualities and of the causality from a Lockian point of view, even if somewhat vulgarized, are faced. For the same attitude, compared to the principles of science, see pp. 100-108, 121, 123, 134, 223-226, 231. On agreement between science and common business of life, common experience, or for explicit calls to common sense cf. pp. 17, 87, 94, 103, 107-108. On the admission of difficulties related to the notion of space, time, motion, etc. and on

Cleanthes, moreover, observes that the remote and abstruse nature of the arguments of theology does not constitute an objection, as Philo claims, because even physics has succeeded in the explanation of the celestial system (remote) and in the anatomy of light (abstruse or minute), while the familiar phenomena of cohesion or nutrition are still incomprehensible. If the subject is of Bishop Butler¹⁸, Maclaurin lingers for a long time on the theme of *remoteness* and *minuteness*, in defending the experimental approach against Descartes' speculative one, because philosophical imagination (even the mathematical imagination), however extravagant, can never match the variety and complexity of nature: the discourse culminates in the confirmation of the alleged continuity between the religious conceptions of the vulgar and those of the scientist and in the image of God as a "great mysterious Being", nevertheless provided with "art and skill"¹⁹. Hume will try to clarify precisely the ambiguity of the mysterious and yet mechanical God, because if the former can be confirmed by Newtonian science, the latter corresponds to a mechanistic ideal that is now in crisis. The critique of the metaphysics of Maclaurin is reversed, that is, in criticism of natural religion.

2. Maclaurin, Cleanthes and the «design argument».

When the attempt to identify the characters of the *Dialogues* intersects with the study of the *design argument* - of the numerous illustrations of the topic proposed in the text of Hume - the hypothesis that in Cleanthes the figure of Maclaurin is to be represented may seem an unhappy reduction of the great philosophical lesson of Hume to the fleeting disputes of the Scottish province. The study of the sources of

evasive answers, cf. pp. 23, 101-103, 386, 98, 99, 224. On the imperfections and prejudices of the senses, cf. pp. 44, 221, 223, 238.

¹⁸ J. Butler, *The Analogy of Religion*, London 1736, in particular Part I, chap. III.

¹⁹ On the subject of *remoteness* and *minuteness* in the earlier writings of Hume, which dealt with it, however, with reference to the doctrines of Locke, I refer to my *Lord Kames*, cit., pp. 78-79, note. On the same topic see *Account*, pp. 14-23. By developing Butler's analogy on the side of science, instead of theology, as Butler does, Maclaurin points out its fallacy, which Philo rightly returns to in part V (see DIA, pp. 189,3-190,9). About the extravagant character of metaphysical imagination, cf. *Account*, pp. 4, 7, 11-13, 25, 37, 67, 90, 91, 94, 96, 110, 221, 380 and the observations of Cleanthes on the fertility of the imagination of Philo (DIA, pp. 172,29-30, p. 194,26-27, 208,6).

the argument would show that it is unfair to restrict our survey to Scottish Newtonians such as Maclaurin or Cheyne; on the contrary, Hume's pages refer not only to Newton and the Newtonian physico-theology of Bentley and Clarke, Whiston and Derham, but also involve the entire scientific culture of the Royal Society, starting from Boyle to go on to the works of naturalists like Wilkins and Ray, or the cosmogonies of Burnet or Derham himself. On the other hand, the study of the forms of the argument would confirm historical research, by analysing the vast range of variants refuted by Philo²⁰.

But the analytical proposals, although enlightening on the physico-theological literature, risk moving away from the Humean text. Nor can we forget that the *De natura deorum* is the model inspired by 'virtuosi' and neoplatonists, latitudinarians and deists, that, starting from Boyle, arguments and examples of Cicero's Balbo are adapted and renewed according to general perspectives and partial results of the new science; they echo from one author to another, so that the comparison with Hume's pages becomes extremely problematic. As his friend Elliot not entirely wrongly observes, from the Book of Job to Boyle's *Lectures* language is the same on the subject, or progress consists of the emphasis of discourse and the multiplication of examples²¹. Nothing prevents Hume from regaining *verbatim* the most convenient formulation, from the logical or rhetorical point of view, of a given theme, without changing his adversary. The absolute prevalence of arguments taken from the texts of naturalists on those deducible from Newton's *Principia* must not, therefore, be misleading, because it responds to the strategy of refutation. In Maclaurin's *Account*, the agile and sober exposition of mechanics and physics reverberates with its 'positive' authoritativeness both on the historical and antimetaphysical introduction, and on the final proposal of the *design argument*.

So, let's put ourselves in Hume's shoes for a moment: he must put in the mouth of Cleanthes - and for the first time - a fair representation of the *design argument*. He is convinced - at least

according to the assumption of these pages - that the argument gains strength from the Newtonian system, but that it is only rhetoric and not correct experimental philosophy. What more canonical form and what more compelling choice of all the variants of the subject could adopt than the image of the universe-machine? If the "one great Machine" is taken from Cheyne's *Philosophical Principles of Religion*, the borrower should not be overrated. To the "weight and measure" that concluded the image of Cheyne (a condensation of Boyle's clock, of the Newtonian experimental criterion and of the Bible, of course), Hume replaces the "Subdivisions, to a degree beyond what human Senses and Faculties can trace and explain", insists on the "most minute Parts" and "Accuracy", brings us back, that is, to the *remoteness* and *minuteness* and the language of Maclaurin²². The whole piece, moreover, is a collage of fragments taken from the physico-theological repertoire and Hume intentionally exaggerates the declamatory tone of Cleanthes, so much in contrast with the presentation of the character: it opens with the pompous "look round the world" of Pope's *Essay on Man* (taken in turn from Ennio's verse, quoted by Cicero: "Aspice hoc sublime candens ...") and closes with the emphatic "design, thought, wisdom and intelligence", which translates the "mentem consilium cogitationem prudentiam" of the *De natura deorum*²³.

Hume offers for Cleanthes the image best suited to those who, like Maclaurin, have just presented the great "system of the world", composed of "lesser systems"²⁴ by the *Principia*. This is confirmed by the soberer conclusion of the intervention, which refers to the rules of analogy, in particular to that which infers the similarity of the causes by the resemblance of the effects, and the observation that "by this argument *a posteriori*, and by this argument alone, we do prove at once the existence of a Deity, and his similarity to human mind and intelligence". The theoretical scope of this discourse, even if its rhetoric is broader, is entirely circumscribed to Newtonian experimental theism.

²⁰ See, for example, A. Jeffner, *Butler and Hume on Religion*, Diakonistyrelsens Bökforlag, Stockholm 1966, pp. 131-71.

²¹ See DIA, pp. 264-65 (on pp. 262-65 the editor of the critical edition reproduces the outline of Elliot's response to Hume on the design argument and on the role of Cleanthes, previously published in D. Stewart, *Works*, ed. by W. Hamilton, Edinburgh 1854, I, pp. 605-7).

²² See *Account*, p. 16. For the presentation of the *design argument*, see DIA, pp. 161,26-162,3. The affinity with the Cheyne passage was noted by Hurlbutt, *Hume, Newton*, cit., pp. 33 and 141. In the 1st ed. of 1705, Cheyne made explicit reference to the clock, in an immediately following passage. For changes in the organic sense, from the second edition (1715) cf. P. Casini, *L'universo macchina*, Laterza, Bari 1969, p. 181 and note.

²³ Cf. Cicero, *De natura deorum* II 4 and 18, III 10; A. Pope, *Essay on Man*, III, v. 7.

²⁴ *Account*, pp. 57, 145, 270.

It is Newton, in fact, who maintains that we know God "only" from the final causes and that God is "somewhat similar" to the human mind, as says Cleanthes says here and which Maclaurin repeats²⁵.

This first presentation of the *design argument*, which occurs in part II, is intertwined with the theme of experimental reasoning and is directed against Demea. The second presentation of the topic, in part III, is directed against the scepticism of Philo. Cleanthes reiterates that the task of the speculative sceptic is to oppose abstruse, remote or subtle arguments, but to allow himself to the common sense and clear instincts of nature, to the arguments that strike him with great force and from which he cannot escape without violence; he invites Philo to examine the "structure and contrivance" of the eye and to admit "from your own feeling, if the idea of a contriver does not immediately flow in upon you with a force like that of sensation". The text of Maclaurin recites in turn:

The plain argument for the existence of the Deity, obvious to all and carrying irresistible conviction with it, / is from the evident contrivance and fitness of things for one another, which we meet with throughout all parts of the universe. / There is no need of nice or subtle reasonings in this matter: a manifest contrivance immediately suggests a contriver. It strikes us like a sensation; and artful reasonings against it may puzzle us, but it is without /shaking our belief. / No person, for example, who knows the principles of optics and the structure of the eye, can believe that it was formed without skill in this science (...) or that the male and female in animals were not formed for each other, and for continuing the species²⁶.

²⁵ Newton, *Principia*, General Scholium. It was objected by B. Morcavallo (*I Personaggi dei "Dialoghi" di David Hume, 1936-1966*, in "Bollettino bibliografico per le scienze morali e sociali", 33-36 (1976), pp. 45-46) that Maclaurin supports a different thesis when he says: "it is only a posteriori that we are going to the necessity of his existence" (*Account*, page 386), which is resuming the cosmological proof exposed by Locke in the *Essay concerning Human Understanding* (1. IV, 10). The relief is correct, but only halfway, because in this place and before (p. 381) Maclaurin claims that the *design argument* proves both the existence and the attributes of God and it is also true that Maclaurin is trying to justify in his own way, as I will say later, Newton's considerations on space. We therefore leave to Hume the freedom to make his thought coherent.

²⁶ *Account*, p. 381; cf. DIA, pp. 176,12-177,14 and p. 177, note 8.

In this case what has been borrowed is obvious and undisputed. If anything, we are witnessing a real shattering of the piece, reused on several occasions²⁷. It should be noted, however, that if the first presentation referred to the solar system and the *Principia*, this second one takes over the *Queries* 28 and 31 of the *Opticks*. The examples of Maclaurin and Cleanthes - the structure of the eye, the difference and reciprocity of the sexes, the animal instincts and, in particular, those of reproduction - are examples of the Ciceronian Balbo, often selected by Newton²⁸. Maclaurin, who does not fail to diligently resume all of Newton's theological arguments, when he comments on the *general scholium*, favours *Opticks'* arguments. It is authorized by the text, but actually he chooses Cicero against Newton. Hume is perfectly aware that the 'anatomy' of light and anatomy of the eye are extremely different questions²⁹; he considers Newton's argument as well as that of Maclaurin to be a makeshift; in fact, Cleanthes, after being refuted in part II, is forced to this different defence of proof of order, which, if supported by the sacred texts of Newton, is based only on Greek anatomy.

Thus, the target of Hume is the Scottish Newtonian experimental theism, of which Maclaurin is the most authoritative interpreter. The difference lies in the prejudicial diffidence for abstract reasoning and for metaphysics, in the accentuation of the empirical foundation and the practical value of Newtonian synthesis, which has as its counterpart the reference to common sense, to the instinctive rather than cognitive nature of the evidence of the *design argument*. The proof is a special coincidence: as the meticulous Baxter approves the argument cited by Maclaurin, so Elliot admires the corresponding words of Cleanthes; «Expressions how just! – he exclaims - yet in the mouth of Cleanthes

²⁷ I divided the passage in five parts, note the conceptual or verbal affinity with DIA, for the first sentence, pp. 176,16-19 and 177,2-3; for the second, pp. 161,32-162,1; for the third, pp. 176,23-177,2; for the fourth, p. 208,12-14; for the fifth, pp. 176,23-24 and 177,5-9.

²⁸ See Newton, *Opticks*, Dover, New York 1952, pp. 369-70, 402-3 and Cicero, *De Natura deorum*, cit., II, 97.120 ff. The symmetry in the animal bodies of *Query* 31 Cleanthes uses in part VIII.

²⁹ See DIA, pp. 189,3-190,10 (Part V).

you must allow me to doubt of their own property"³⁰. All agree, then, on the almost sensitive nature of the evidence, the differences emerge elsewhere. Limiting ourselves to Elliot for now, he disagrees above all on the concessions made by Cleanthes: having admitted to founding inference only on experience, so why should we concede that the effects must be exactly similar?³¹

Hume could not have taken this criticism into account, without changing his interlocutor. The theological claims he fought were those of those who shared with him the idea that science is the generalization of particular propositions, moves from the most familiar principles and judges the causes only from the effects. Philo turns the arguments of Maclaurin against continental philosophy to Cleanthes. The correct use of the analogical inference, the caution and gradualism of the steps of the scientist³², the modest recognition of the partiality of the acquired results³³, the exemplification of the scientific method in the work of Copernicus and Galileo are all topics of discussion and conflicts between Cleanthes and Philo, simply because of the fact that Maclaurin had dealt with it, more or less insistently, in the *Account*.

The generic use of the term analogia, as a synonym of similarity or in a proper or proportional sense, is common to the *Dialogues* and the *Account*. Maclaurin is ironic on the passion for the analogies of Pythagoras, Kepler and Huygens himself, reminding with Bacon that mathematics must delimit, not generate or procreate natural philosophy³⁴. In the chapter dedicated to the rebuttal of Leibniz's 'measure of the forces', recurrent statements closely related to Philo's warnings against Cleanthes: 'Causes are not to be measured by any effects produced by them; taken without any choice, or judgment, or regard to their circumstances ...'. "The principle 'that the cause is to be measured by its effect' is one of those that will be very apt to lead us into error, both in metaphysics and in natural philosophy, if applied in a

³⁰ *Ibid.*, p. 264; note that both Cleanthes (*ibid.*, pp. 176,18), and Demea appeal to common sense; for Maclaurin see the previous note 17, for Baxter see *Enquiry*, pp. 153, 167, 336; *Appendix*, pp. 74, 76, 79, 218; *Matho*, I, pp. 25, 146, 170, 213, 344; II, pp. 31, 159, 193.

³¹ See DIA, p. 263.

³² Cf. *ibid.*, p. 167,20 and 25 with *Account*, pp. 16, 18, 19, 45.

³³ Cf. DIA, p. 169,17-19 and *Accounts*, pp. 23, 55, 369.

³⁴ See *Account*, pp. 34-35 and 50-52.

vague and indistinct manner, without sufficient precautions"³⁵ In other cases it clearly distinguishes, in accordance with Newton's rules, the possibility of extending the validity of a "from phenomena" assertion, or simply hypothetically, "by analogy"³⁶. Philo principle is inclined to this dual Newtonian use, according to which similar effects prove similar causes, inductive and certain the first, analogical and only hypothetical the latter, when the similarity is not exact³⁷.

If the well-known Newtonian applications of the principle are not given any space in the *Dialogues*, there is nevertheless an excellent substitution: when Philo observes that the universe is the only effect of his species and Cleanthes replies that the objection would also be valid against the Copernican system, we witness a very lively apology of Galileo, by Philo, whose meaning can only be appreciated in comparison with the text of Maclaurin³⁸. Although he praises Galileo, Maclaurin conceives the history of science as anticipation and progress towards Newton; the real obstacles to the welcoming of the Copernican system are the lack of an adequate theory of motion, the absurdities of philosophers, vulgar prejudices, superstition. If these considerations are perfectly in line with Cleanthes's reply, at the beginning of Part III, Philo, using the same themes as the opponent deduced from the Galilean *Dialogues*, manages to give a real lesson in scientific historiography, which Adam Smith will take into account in his *Essay on astronomy*. Beyond the theological dispute, when Philo invites Cleanthes to scrutinize the reasons on which the modern astronomical system is based and to retrace Galileo's reasonings, one feels the resentment of

³⁵ Cf. *ibid.*, pp. 136-38 and DIA, p. 167,11-13. It is an interesting coincidence that Hume adds in note in the 1751 edition of the *Philosophical Essays*, cit. (cf. *Enquiry*, p.77 note) a reference to the dispute on the forces and shares with Maclaurin the idea that the question admits a purely experimental solution.

³⁶ On analogy or fully similarity cf. *Account*, pp. 21, 47-49, 109, 115, 130-132, 148, 271-273, 287, 291-292, 296-297, 372, 391.

³⁷ See Hume, *Enquiry*, pp. 137, 139 and DIA, pp. 190,19-22 and 195,15-19.

³⁸ Cf. *Account*, pp. 36, 54-56, 238 with DIA, pp. 171,4-173.15.

the anatomist and the historian of human nature towards the sufficiency of the Newtonian mathematician.

3. Baxter, Demea and mysticism in the Dialogues.

Baxter presents himself in his writings not as a mystic, but as a man of science. On the other hand, the student of the *Dialogues* has always had difficulty in finding a prototype of Demea that would reconcile the mystic with the proponent of the *a priori* proof of existence and of divine attributes. The fact, however, that Demea introduces the theme of mysticism using the words of Maclaurin allows us to trace the historical source of the problem: the dilemma mysticism/anthropomorphism is traceable in the *General Scholium* of the *Principia*. In addition to the language of the mystics, Newton uses negative theology to defend his theses on space against the accusation of pantheism, as well as using Locke's language and arguments to defend our legitimate knowledge of divine attributes and the validity of *design argument*. Far from separating God and the world, physics and metaphysics, in an ontological sense, he is willing to methodologically separate the two fields of inquiry. Convinced as Law, and Böhme were, that nature is the place of the manifestation of the divine, God remains, albeit in the last instance, the object of experimental investigation. When the delicate balance of the *Scholium* is broken, as in the texts of Maclaurin and Baxter, the dilemma mysticism/anthropomorphism becomes evident.

The apparent disorganization of Maclaurin's comment, with his digressions, repetitions, reticence and admissions, responds to the intention of defending Newton's caution even on religious grounds. The aforementioned reference to *De mundo* allows Maclaurin to gloss over that sort of somewhat enigmatic litany about the meaning of the name Deus, Dominus - with whom Newton opposed to the perfect, but too intimate, God of Descartes, the God of the Bible, who is a true lord, in that he has a real lordship (space) - and to divert the discourse on the limits of the analogical attribution of divine titles (also Newton mentions them, but only at the end of the discourse on the reality of space). The *Scholium* thus appears less inspired and Newton is proposed as a model of religious sobriety, both against the excesses of mysticism, and against those of a not dissimilar sign, because it is the result of an

"exalted" idea of divinity, of continental philosophy³⁹. After this long premise, Maclaurin poses, abruptly, at the centre of the commentary and foundation of religion, the *design argument*, in the Ciceronian, popular and sentimental version that we mentioned, only to re-establish immediately afterwards the connection with the Newtonian discoveries, in the deduction of divine attributes (to exemplify: the «subtlety» of particle motions suggests that God is "active and present everywhere"⁴⁰). He then turns to the examination of the Newtonian conception of space with evident discomfort, because he prefers the 'experimental' proofs drawn from the reality of centrifugal forces and absolute motion⁴¹. Against the accusation of making space the divine sensory (and, therefore, of God the soul of the world, as in part VI proposes Philo) he insists in a compromising way on the link between the metaphor of the sensory and the principle of analogical knowledge of the attributes divine⁴². Regarding the substantial presence of God in the universe, Maclaurin confines himself to resuming the text of the *Scholium*, but distinguishes, with Locke, the "a posteriori inference of the necessity of divine existence" from deductive and certain knowledges of geometry and "even" from the "direct self-evidence we have of the necessary existence of space"⁴³, with the clear intent of censorship towards a priori speculations on the attributes of a necessary existence - actually diverging, in this case, from the theses of Newton and Clarke. The comment concludes with the discussion of the cause of gravity and of God's indirect intervention, which divides him from Baxter, and with a final paragraph on immortality, clearly suggested by Butler's *Analogy of Religion*, for the probabilistic tone of the argumentation and for the themes that recur in it - from the "infancy" and "gradualness" of knowledge to the "state of preparation and testing" of the human condition.

In conclusion, Maclaurin is divided between faithful adherence to the *Scholium* theses and the drastic downsizing of their metaphysical and theological implications. The joint reading of the comment by

³⁹ See *Account*, pp. 377-80.

⁴⁰ *Ibid.*, p. 381.

⁴¹ See *ibid.*, p. 386.

⁴² See *ibid.*, p. 383.

⁴³ *Ibid.*, p. 386.

Maclaurin and Baxter's *Appendix*, which denounces the ambiguity and contradictions of the adversary and accuses him of anthropomorphism, allow Hume to shift the polemics between the two from the role of the mechanism and the secondary causes in the explanation of the natural phenomena to the conflict between mysticism and anthropomorphism. This thesis of displacement will appear forced only to those who forget the principle of equivalence or specularity between the mental universe and the material universe that Hume claims in his writings and think that the problem of the effectiveness of the causes or the necessary connection does not occur in the *Dialogues*, while it constitutes the nucleus of the argumentation of part IV, dedicated to mysticism and the dissimilarity of the causes. Even if the universe referred to a project in the divine mind "consisting of different and differently ordered ideas" it would remain to explain the principle of connection of this ideal world⁴⁴. If this is Philo's main argument, in his details he makes fun of Maclaurin, as well as of Baxter. To give just two examples, the comparison between the human mind and the animal body does not only serve to refute the hypothesis of the book-animal of Cleanthes, but, by insisting on the difference with which the causes act on the thought of two different people, or of the same person at different times, also responds to the example with which Maclaurin had claimed to solve the problem of causality⁴⁵. The subsequent observation that the divine mental universe involves us in a search without end, while, if

⁴⁴ In section XIV of the *Treatise*, Hume observes that all philosophers almost agree in considering "perfectly unknown" the ultimate strength or efficacy of nature (*A Treatise of Human Nature*, Clarendon Press, Oxford 1964, p.159) and this is the answer that Cleanthes gives to Philo at the end of Part IV; Hume adds that the Cartesians, in consideration of the passivity of matter (it is the foundation of Baxter's thesis) attribute to God the full effectiveness of the causes. Finally, note - and it is the crux of the argument - that the principle of union of internal perceptions is equally incomprehensible (p. 169). The equivalence or specularity between the material and mental universe is reiterated in the section on the immateriality of the soul, in which it is claimed that the doctrine of simplicity of the thinking substance is a true atheism (it is Cleanthes's response to the mysticism of Demea).

⁴⁵ See *Account*, p. 99 and DIA, pp. 184.15-185.2.

we imagine a principle of order intrinsic to matter, we have satisfied our "inquisitive humour", found our God, "and the sooner we arrive at that Divine Being, so much the better" is certainly a consideration worthy of the "careless" Philo, but also the resumption of the accusation of Maclaurin against Baxter and, at the same time, the ironic counterfeiting of the method of the latter. Baxter, in fact, maintained with good reason that the hypothesis of the *ethereal medium*, did nothing but move the difficulties of a mechanical explanation from the gravity to the ether, if anything multiplying them, and that it was therefore preferable to immediately resort to infinite omnipotence; in the *Inquiry* he was satisfied that his method "makes the shortest work with Atheists of all denominations"⁴⁶.

But, if the quarrels of Maclaurin with Baxter are the reason for Philo's irony, the authoritative source of the dilemma is always Newton with his arguments to defend the reality of space: the identity of the self, despite the passing of ideas, the simplicity of the soul, in spite of the *sensorium*, the absence of organs and parts in God. Maclaurin, who condemns mystical abstractions, who finds the metaphor of the *sensorium* more perspicuous than the metaphysical doctrines on the substantial presence of God in the universe, is naturally a candidate to be idealized by Hume as a supporter of anthropomorphism to the bitter end. In parallel, and perhaps with better requirements, Baxter is well-suited to represent the opposite role, if we compare his opinions with Demea 'mystic' discourses.

In the initial intervention of part II, the recourse to the long passage of negative theology of Malebranche leads us as much to Baxter as to the mystic Newton of the Scholium. To Baxter, because Hume has already accused him in his *Philosophical Essays* of being the only English follower of Malebranche regarding the doctrine of exclusive divine efficacy. To Newton, because as Malebranche affirms that God comprehends the perfections of matter and created spirits, without

⁴⁶ *Enquiry*, p. 37. See *Appendix*, p. 188, or *Matho*, I, p. 175, where Baxter says: "On the contrary, we must soon, very soon, come to the first Cause, if we would reason right".

resembling either the first or the latter, Newton says of God that he is "totus oculus, totus auris ... totus vis sentiendi intelligendi et agendi sed more minime humano, more minime corporeo, more nobis prorsus incognito"⁴⁷. We have already discussed, at the beginning, the final intervention of Part III. There remains the answer to Cleanthes, who lost his calm, accuses Demea of mysticism, at the beginning of part IV. The identity of the self or of the person - observes Demea (in contrast to Newton) - does not eliminate the composition of the faculties of the soul or the succession of ideas in the mind; there is no resemblance, therefore, with perfect simplicity and divine immutability. The following discourse recalls, but only to a certain extent, Clarke's considerations on divine eternity. Even in this case, however, the student surpasses the teacher. In fact, if Clarke cautiously approves Boethius' definition of God's eternity ("vitae interminabilis tota simul & perfecta possessio"), Baxter repeats enthusiastically "such a *noble*, such a *philosophical*, such an *exalted idea* of the Divine Mind". If Clarke agrees with the highly authoritative widely cited Tillotson in considering unintelligible the scholarly assertion that God is "one point or instant comprehending eternity and wherein all things are really coexistent," Baxter goes further, when he faces the "extremely metaphysical speculation" of the divine "unsuccessive eternity" and the result has a noticeable conceptual affinity with the Demea's discourse⁴⁸.

There is also a different meaning of the mystic term which is particularly suited to Baxter, since it not only considers inexplicable, without constant recourse to God, any natural phenomenon other than the impact, but expresses this conviction, especially in his *Appendix*, with the language of vision. As Dugald Stewart recalls, the language used by Reid in the 1764 *Inquiry into the Human Mind* was also "charged with mysticism". It is therefore not necessary to identify Demea with a mystic, in the proper sense; "All true Theists", Demea

⁴⁷ For other similarities, cf. *Appendix*, p. 159 with DIA, p. 159,16-17 and *Matho*, II, pp. 287, 334 with DIA, p. 159,7-10.

⁴⁸ For Clarke see *A Demonstration of the Being and Attributes of God*, London 1705, pp. 82-86 and 92. For Baxter, *Enquiry*, pp. 374-76.

observes, and "all the sound, orthodox Divines", Philo warns, support the "perfect Immutability and Simplicity" of the divine being⁴⁹.

4. *A priori arguments, conjectures and curiosities of Baxter and Demea.*

Anyone who has ever read the *Dialogues* will hardly be able to dissociate the ridiculous image of the character from the scandalized protests with which he welcomes the first presentation of the *design argument*: No a priori demonstrations! No abstract topics! The trials of God reduced to experience and probability! The indignation is already present in the pages of the *Appendix*, when Baxter criticizes the passage, already mentioned, in which Maclaurin takes up the *design argument* as the only valid one which can reveal to us the divine attributes and then distinguishes the necessity of the truths of geometry, the self-evidence of the necessity of space and subordinates to them (from the point of view of the degree of evidence) the a posteriori inference of the necessity of divine existence:

Nor should we so insist upon any one demonstration of the existence of the Deity (for there are innumerable) as to lessen the conviction arising from others. Demonstration from abstract reason, and the nature of things, when once we see it, gives conviction universally. This is the case in geometry and algebra. Proof from experiments is more obvious, and fitted to all capacities. (...) This animadversion on arguments *à priori* was made, when Sir *Isaac Newton's* notion of space was no way in the question; nor does that notion want such an apology. If the arguments *à priori* were inconclusive, it would be right to shew in what respect and to correct the error. Truth does *not* want pious frauds to support it. But it was argued then [in the *Enquiry*]), it is needless to insist on the difference between demonstration *à priori* and

, unless truth were less certain in the one method than the other. The comparison here serves only to raise a suspicion against both sorts of arguments, in as much as geometrical

⁴⁹ See D. Stewart, *Account of the Life and writing of Th. Reid*, in T. Reid, *Works*, ed. by W. Hamilton, Edinburgh 1863, p. 21. See DIA, 182, 8 and 183, 7-8.

demonstration is preferred to both: and yet there is no difference made, even by mathematicians, between the certainty of the *synthetic* and *analytic* methods.(...) But the necessity of an *Ininitely perfect intelligent Being*, is demonstrable without [124] attending to any effects; even from the necessity of *eternal truth in geometry*, or in other abstract sciences⁵⁰. (...)A *Sceptic* in natural religion, or with respect to the existence of the Deity, is consistent enough with himself, when he is a sceptic in speculative science⁵¹.(...) (...)Those who say, such reasoning is very metaphysical, may please to observe, that it is only common and self-evident principles, joined as they ought to be : and that all mathematics are as metaphysical. (...)It is not like a mathematician to complain of metaphysical reasoning⁵². (...) What self-evidence have we for the necessary existence of space, or immensity, which we have not for the necessary existence of an immense Being? No man ever saw space with his eyes, or heard it, or touched it. It is not an object of sense; but a conclusion drawn from reason. And the necessary existence of an immense Being, is also a conclusion drawn from reason; since a property or attribute, cannot be, or exist, without a subject⁵³.

If Baxter is more faithful to Newton on the conception of space, he diverges from him when he insists on the equivalence of the synthetic and analytical method. "It is evident that, as in mathematics, so in natural philosophy - observes Maclaurin, without noticing that he is quoting the Query 31 - the investigation of difficult things by the method of analysis ought ever to precede the method of composition, or the synthesis"⁵⁴. Otherwise you would never be sure of reaching principles that really apply in nature. Hume was in such strong agreement with this that he made it the criterion of his critique of natural theology: either the Christian god is a hypothesis, a theological conjecture, and then he can be called to explain the phenomena, or he adheres to the method of analysis, and then it is necessary to assign to the cause only those qualities that can be derived from the effects and

⁵⁰ *Appendix*, pp. 121-125.

⁵¹ *Ibid.*, p. 125.

⁵² *Ibid.*, pp. 127-128.

⁵³ *Ibid.*, p. 132.

⁵⁴ *Account*, p. 9.

it is not possible, through the synthesis, to infer different effects from those known. To have delivered God to experimental philosophy, as Newton did, means that for God we cannot make exceptions. This is the theme of Part IX of the *Dialogues*, in which the "common" a priori argument is refuted, which is also that of Clarke, used by Newton too in the *General Scholium*. The following considerations are sufficient on this:

1. In Part II, Philo grants the validity of the cosmological proof, in the sense of Locke, because Maclaurin recognizes its validity.

2. The proof of part IX is the ontological variant of the cosmological proof, discussed by Clarke in the *Demonstration of the Being and Attributes of God*, whose qualifying point is the distinction between contingent existence and necessary existence, which allows the deduction of divine attributes.

3. Cleanthes is designed to refute the argument, thus depriving Philo of "his greatest amusement", because Maclaurin is able to distinguish it from that of Locke. But since he is that crude metaphysician that we now know, he uses against Demea, that is, against Baxter, the argument that Baxter has turned against Berkeley, even if expressed in the words of the Hume of the *Treatise*⁵⁵.

4. The proof of the contingency of matter and of the form of the universe, taken up and refuted by Cleanthes, is rather that of Clarke, but it is also the theme of the last section of Baxter's *Inquiry*. Baxter's verbosity is justified by the number of objections raised by his readers, presumably Scottish.

To return to Part II of the *Dialogues*, Philo does not engage Demea's protests, but begins to discuss with Cleanthes the problem of whether the faint resemblance between a house and the universe leads to something more than a simple conjecture about the cause of the second. Exasperated by the presumptive atmosphere that circulates around the proofs of God, Demea interrupts again, objecting against Philo too this time. In this regard, we read in the *Appendix*:

As to what is subjoined, that it appeared to him [Newton] much more just and reasonable , to suppose that the whole chain of causes, or the several series of them should center in him, I take it to

⁵⁵ See *Enquiry*, pp. 301-305.

be an unwary expression of this author. One cannot imagine that Sir *Isaac Newton* went only on supposition, in such a subject. ... The Deity is not only at the head of nature, but in every part of it. A *chain of material causes* betwixt the Deity and the effect produced, and much more a *series of them*, is such a supposition, as would conceal the Deity from the knowledge of mortals for ever. We might search for matter above matter; till we were lost in a labyrinth, out of which no philosopher ever yet found his way. [ibidem in note:] It is only telling us ones's opinion, *what it is most reasonable to suppose*. But have we nothing more than *supposition*, for not excluding the Deity out of Nature? This is a precarious foundation of such an important point; and really hurts the interest we should promote, if natural religion be our care (...). Immediately after it is added, "the laws of nature are constant and regular, and *for ought we know*, all of them may be resolved into *one general and extensive power*" (...) *What may be, for ought we know, may not be, for ought we know*; and thus we are sent to an *unknown power*, which, *in a great measure* only, derives its properties and efficacy from the immediate influence of the *first mover*. (...) This indeed renders those influences uncertain, till the *unknown power* is first discovered. Had it not been better to have reasoned a little, than to have written in this ambiguous and unsatisfying manner?(...) This is far from the candour of a fairer enquirer⁵⁶.

The criticism of Baxter has its effectiveness; to the thesis that gravity depends on the direct divine intervention, Maclaurin can only oppose the hypothesis of the *ethereal medium* and ends up involving God himself in the context of possible conjectures. It will be said that these concern the modalities of divine intervention in the production of natural phenomena, not as in the *Dialogues*, the analogical weakness of the *design argument*. I reply that Hume transfers the criticism of Baxter to the proof of order, and I do not say this for the sake of thesis. Does Hume really establish a difference between the design argument and the other causal arguments? If anything Baxter suggests the way to show that this difference does not exist. Hume uses his protests to solicit the reader's doubts, from the beginning, about the *design argument* and, at the same time, he neutralizes them with ridicule. Furthermore, they offer the opportunity to bring the *design argument*

⁵⁶ Appendix, pp. 109-112.

back to inductive reasoning. According to Philo, in fact, Demea finds that the subject, as presented by Cleanthes, threatens 'to escape' from its 'hold and vanish into Air'; therefore he considers it 'so disguis'd', that he 'can scarcely believe it to be set in its true Light'⁵⁷. The relief - we will see - corresponds, much better than to the words of Cleanthes, to the reaction of Baxter when faced with the comment by Maclaurin. Philo, on the other hand, maintains that the argument is "fairly represented", because reasoning on the basis of experience involves (as Cleanthes "tacitly" grants) the fact that order is not in itself proof of design or intention, but only in the measure in which there has been previous experience that it derives from that principle. In this way, any reference to the causal element in the sense of power or effectiveness of the causes is eliminated from the *design argument*. This exclusion is also the pre-eminent feature of the example of Cleanthes's book-animal: the illustration is valid, provided, at a preliminary stage, it is assumed (besides the universal language) that books are natural productions that perpetuate themselves as animals or plants. This is precisely what Baxter is not prepared to grant to Maclaurin: the order itself is not proof of divine intelligence, if it is supposed that matter can generate it; it is not proof even if it is supposed that matter can preserve, even if it does not create order. Thirdly, Baxter devalues the role of mechanism in nature, emphasizes the distances between human machines and works of nature, considers anthropomorphic the idea that God should use tools or mechanisms. In short, for Baxter, or in the works of nature we find art and power together, the project combined with divine activity, or the *design argument* becomes a mere hypothesis. He quotes Maclaurin's plain argument about the structure of the eye, observing that it is expressed "very rightly":

This is a just argument, and forces our assent. The Author of the eye, not only has skill in optics, but is the fountain of that science. From his works it is that we derive the little we know in the wonders of vision : and it is so in all the other parts of knowledge. All our boasted experiments are but poor imitations of Divine art. To say, *the Deity has skill*, is a vast diminution of truth. Our science disappears before infinity of knowledge. But we should not weaken this conviction from *final causes*, by supposing that matter can

⁵⁷ See DIA, p. 165,7-11. See too 165,13 and 160,4.

perform such wonders; or that the Author of nature only contrived the art, and left the execution to a *dead substance* ; or that a *subtile fluid* does all that is most noble in nature. To suppose that dead matter can observe the rules of optics, and form an eye, is almost as unwarrantable, as to suppose that dead matter might have formed an eye at first. The first of these suppositions leads men to the last. *That effect* is as impossible to matter now, as it was several thousand years ago. It was from supposing that dead matter could perform such wonders, that the Deity came to be excluded out of nature; and that men are willing now to take him in again by *supposition*. Have we forgot *Leibnitz*, who extolled the original skill in the contrivance of things, as much as ever man did? It was to bring in a *necessary chain of causes*, and to leave the execution of all that art to matter, which he supposed could not go wrong, tho' left to itself. Such reasonings as these, gave rise to the severe, but just distinction, *verbis ponere, re tollere*, as was observed above. We thus inconsistently depreciate the Divine art in one respect, while we seem to exalt it in another: we vilify it, by supposing matter can do the same things, and only extoll what was done many thousand years since. (...) We ought not therefore to ascribe the original contrivance to a *cause wise and powerful*, and the performance to a *cause blind and impotent*. The one part of this reasoning is directly repugnant to the other. The performance requires knowledge, as much as the contrivance at first. If an ingenious man sees an artist do a fine piece of work, he might possibly imitate it afterward, in some sort: but it is repugnant to common sense to suppose, that the materials themselves, the wood, or the brass, or the ivory, should do the same thing for ever after, and to as great perfection⁵⁸. What strange things do philosophers imagine! for the two cases are precisely the same, as to the absurdity. To say, the Deity interposes, when he sees that matter would go wrong, is the same thing in other words, as owning that he interposes always, if that were proper. Every particle of matter resists a change of its present state, and therefore could not effect a change of state in itself, nor in other particles. Every particle therefore would still go wrong. Not to speak at present of forming an eye, or the organs of hearing, or an animal body, or maintaining the circulation ; because philosophers imagine that a multitude of difficulties makes the thing easier : not to speak of these, I say, at present; how could a body moving in circle (..).The original contrivance in the works of creation, is repeated in every

⁵⁸ *Appendix*, pp. 111-116.

production. Can matter do this? Can it copy the fitness of things to each other so exactly? The original contrivance is adorable. We are certain, demonstratively certain, that it is the work of the living God: but it is the present performance that *strikes us like a sensation*. This is at once both demonstration and experiment. A sensation in the literal sense. The inexpressible pleasure to see creating power with our eyes! We see creating power directed by infinite knowledge, in every new production. We live by it⁵⁹. (...) It is taken for granted that [gravity and mechanical principles] if they did not create the world, they do in fact govern it. This the very worst reason that could be given. (...) Men have seen nothing of the Deity's performance, these many thousand years, not since the creation. I should appear to all serious men, a scoffing buffoon, if I should ask, where the Deity hath retired to rest ? And yet I am justified to ask that absurd question here. (...) No man will suffer himself to be told, that matter performs now, what it was impossible for it to perform at the beginning, and in all time past⁶⁰.

In the "works of art" Mechanism is only a set of parts 'differently formed' and variously connected to communicate the movement from one part to another, but it is never a cause of movement, which must be impressed from the outside. Automata are an illusion: men are inclined to suppose that the more complicated the mechanisms, the more they are capable of spontaneous movement, whereas it is true that they are more subject to disorder⁶¹. 'It is an injury done to truth, to compare the performance of human art with the works of nature'⁶². Machines designed by man exploit one, or at most two powers of action, whereas "in the mechanism of animal body, an inconceivable number of powers act; or, to speak more truly, it is the *same power* that acts in many different place at once, and with inexpressible variety"⁶³. The devaluation of the mechanism is such that Baxter must resort, like Berkeley or Clarke, to providence to justify it. Hence also the polemic against secondary causes, of which Maclaurin speaks, and the accusation of anthropomorphism:

⁵⁹ *Ibid.*, p. 120.

⁶⁰ *Ibid.*, pp. 202-204 and p. 198.

⁶¹ *Ibid.*, pp. 141 and 158.

⁶² *Ibid.*, pp. 153.

⁶³ *Ibid.*, pp.145.

Employing *subordinate instruments* and *agents*, is a mark of weakness among men, whose power and presence is much limited. The Deity hath no need of them, who *is every where active and every where present*⁶⁴. (...) Is the Deity only like a great man, who employs other men to act for him, in distant places where he himself cannot be present; or at times when he is otherwise occupied?(...) It is a compliment payed to a great man, to say he does what other men do for him. (...) In mechanism, men help their weakness with the impressions made on matter by immaterial power ; such as *gravity, elasticity, repulse*.(...) Philosophers have ridiculously supposed that such a needy shift must be *art* in the Deity: they have imagined from the first ages, and do still imagine, that what is a mark of weakness in mankind, must be a perfection in Omnipotence!⁶⁵ (...) We employ a wedge to *cleave*, a screw to *press*, a wheel to *raise up*, a lever to *move*. Is the Deity reduced to these necessities, to divide matter by matter, Or to raise weight by weight? (...) Dare I observe that the philosopher's Deity seems to be made up of human infirmities ? Or does the Deity *act*, and do these agents and instruments *co-operate* with him ? It is said, They have *their proper force and efficacy*. (...) It is foolish (as hath been observed) to imagine the Deity using his own power at second hand. *Gravity, attraction, and repulse*, which are mentioned here, are neither *agent*, nor *instruments*; but the immediate impressions of immaterial power. (...) If the impression of the power were mechanical, the *common course of nature* would be mechanical! The Deity himself could do nothing but mechanically, that is, necessarily, or as motion is conveyed in mechanism from one part of the machine to another. This is literally *Spinoza's doctrine*, which I wish the author had considered better⁶⁶.

Baxter has an almost Manichaeic hatred for matter: it is the limit of perception and activity of the soul, as well as the obstacle that only infinite omnipotence can overcome. Hence the importance that the phenomena of vegetation, of generation, of instinct acquire in his works; hence the interest and curiosity of Demea for the hypotheses of Philo in part VII of the *Dialogues*. The reproduction of animals and plants is for Baxter the renewal of creation and the function of the seeds is eminently providential: the seeds are used to sow without

⁶⁴ *Ibid.*, pp. 220.

⁶⁵ *Ibid.*, pp. 222.

⁶⁶ *Ibid.*, pp. 225-227.

confusion ("that we might not be at loss to guess what was to happen") and make men industrious. The seeds of animals are used to establish kinship relations. Together they serve to found society among men. As for the lower animals, especially insects: "they act by reason, not their own; and far superior to ours"⁶⁷. As Baxter contrasts vegetation, generation and instinct with the second causes of Maclaurin, so Philo contrasts the analogous hypothesis of the origin of the universe. Many themes are common to part VII and to Baxter's works: the unusual reference to the loom, the animal that lays eggs in the sand, the reference to the anatomy of the seeds, the supposition of interplanetary travels, the 'vulgar' use of the term nature; even the hypothesis of a planet entirely inhabited by spiders finds an ironic justification here⁶⁸.

Nor do Hume's criticisms of Demea begin only in part IX. To the materialistic hypothesis of part VIII, Demea immediately objects that it presupposes that 'Matter can acquire Motion without any voluntary agent or first Mover' and Philo replies very abruptly that 'Motion, in many Instances, from Gravity, from Elasticity, from Electricity begins in Matter without any known voluntary Agent' and "to suppose always in these Cases, an unknown voluntary Agent is mere hypothesis ". He also adds the thesis of conservation of momentum, literally shooting his opponent a sentence of mechanics: "as much as is lost by the composition of Motion, as much is gain'd by its Resolution"⁶⁹. This passage can be read as a critique of Clarke's ideas, which assumed gravity, attraction and repulsion to be effects caused by intelligent subordinate agents. But the reference to electricity seems rather strange in the case that the interlocutor is Clarke, quite natural instead in the case of Baxter, who stayed in Holland from '41 to '47 and reports in the *Appendix* with great detail the experiments of Musschenbroek in Leiden⁷⁰. In addition, Maclaurin's phrase "as motion is lost in the

⁶⁷ *Ibid.*, p. 214 note.

⁶⁸ In the ninth *conference of Matho*, II, pp. 129 ff., Baxter abandons himself to the most exalting suppositions about the habitability of the primary and secondary planets of the solar system and, in particular, given the size of Jupiter and the number of its moons, about the rationality of its inhabitants; it would be absurd, and there would be doubts about the creator if they were uninhabited or inhabited by brutes.

⁶⁹ DIA, p. 209,15-16, and 20-23, p. 210,1-2.

⁷⁰ See *Appendix*, pp. 54-58 note.

composition, so *it is necessary gained in the resolution of motion*" gives rise to an entire section of discussions and challenges in the *Appendix*.

It is no coincidence that this phrase criticized by Baxter and proposed by Philo recurs precisely in the chapter in which Maclaurin discusses the measure of forces, the cautious and correct way in which the inductive principle is used and - I add now - asserts the universal validity of the law of equality of action and reaction "even in the motions produced by voluntary and intelligent agents"⁷¹. Even this law had been one of the main points of conflict between Baxter and Maclaurin⁷². This aspect of the polemic clarifies the intervention of Philo who concludes part VIII of the *Dialogues*, when he accuses Cleanthes of reversing the order between thought and matter, giving precedence to the former and invokes the probable universality of the law of action and reaction to insinuate again the hypothesis of God as anima mundi or of the animal universe. The following invitation to the suspension of judgment, given that the disputes between supporters of different religious systems pave the way for the complete triumph of the sceptic, but above all the exhortation to "Sobriety in condemning each other", since no system is free from inconsistencies, reports the reader to the origin of the controversy, to the violent criticism of Baxter and Hume by Maclaurin. The words of Philo seem to anticipate the conclusion of the *Dialogues* and the conciliatory tone of part XII.

5. Concluding remarks.

The texts of Maclaurin and Baxter certainly do not allow a detailed comparison with the X-XII parts of the *Dialogues*, but I do not think that this constitutes a difficulty for its assumption. The distinction between the discourses on natural attributes and the moral attributes of divinity is even explicit in one of Cleanthes' interventions. On the

⁷¹ *Account*, p. 146.

⁷² Maclaurin observes that "The establishing the equality of action and reaction even in those powers [such as gravitation] which seem to surpass the mechanism and to be more immediately derived" from God constitutes an indication in favour of the secondary causes (*Account*, pp. 388-389). Baxter replies that, if a mechanical principle such as the law of reciprocal action regulates the powers that "surpass mechanism", then the influence of matter on God is admitted (*Appendix*, pp. 172 and 174). See DIA, 213,31-32 for Philo's exhortation to sobriety.

contrary, solidarity or consonance between theoretical positions and characters' practices is required. As for Maclaurin, there is no doubt that his civil commitment, his insistence on the practical ends of science, the defence of merit and virtue against theological speculations and the tendencies of mysticism to the annihilation of self and, above all, the Butlerian conclusion of his comment highlights a decidedly favourable orientation towards the 'moderate' party of the Scottish church.

As for Baxter, we have even more complete information. He shares the pessimism of Demea: he affirms that the pain in this life is far more extensive than pleasure, that all bodily pleasures are only incentives for pain, that there is no congruence between virtue and happiness⁷³. In fact, these theses are only exhibited in a posthumous work, published in 1779, but it is difficult to imagine that Hume, who resided a short distance from Baxter, shared with him common acquaintances as Lord Kames and John Wilkes, did not know his religious orientations. The reason for human misery and weakness is evident, in any case, in the last conference of the *Matho* dialogue. Here Baxter, who in his *Enquiry* quoted Shaftesbury with disapproval, has words of condemnation for his moral conceptions and for the ethics of Hutcheson's benevolence: self-love and the desire for eternal happiness constitute the exclusive motive of virtuous actions. Moreover, Baxter shows a deep aversion to Bayle's theses on atheist societies and on the relationship between atheism and superstition⁷⁴. The positions of Hutcheson, in the *System of Moral Philosophy*, are just a little more nuanced on the subject: an atheist society is an unreal problem and, although he claims that the corruption of the best things may be the most damaging, he recognizes that the removal of religion means the elimination of stronger bonds and some of the noblest motives of associated life. These are the themes on which the *Dialogues* end; if I referred to Hutcheson, it is not just because he is Baxter's opponent. In the central chapters of *System* on the nature of God, we not only rediscover the usual themes of the *design argument*, but a number of references and ideas taken up by Hume in the final parts of the *Dialogues*, from the relationship between atheism and society to the

⁷³ See J. McCosh, *The Scottish Philosophy*, London 1873, pp. 46-47.

⁷⁴ See *Matho*, II, pp. 310-333.

religious guarantee of oaths, from the prevalence of good over evil to the infirmary or Lazar-house of Milton, from the objections of the Epicureans on the goodness of the natural order to the subject of industriousness and work, from criticism to the melancholic conceptions of earthly life to the unfinished house illustration, of which Philo reverses the meaning⁷⁵. Also in this case, it is not a matter of disavowing the wide context of reference of the discussions in the *Dialogues*, starting from the antagonism between 'highflyers' and 'moderates' in the Scottish church, but rather clarifying the compositional method of the *Dialogues*: from a small nucleus of privileged sources to the use of the most satisfactory expressions from a rhetorical point of view, taken from the literature of the genre, which Hume knew very well and which he probably patiently wrote down in the notebooks of notes dedicated to the religious question.

However, it is possible to trace the source of almost everything that is said by Demea, Cleanthes, sometimes also by Philo in the first nine parts, that is in two thirds of the work, in Maclaurin's *Account* and in Baxter's texts. The position of Philo's interlocutors, in the perspective proposed here, no longer has anything random about it; what seems such is historically justified by the texts, even if, thanks to the controversy of Baxter, Hume performs a subtle work of purification of the ambiguous attitude of Maclaurin, through the successive concessions and contradictions into which he makes Cleanthes fall. Nor could the centrality of the role played by Baxter and Maclaurin in the nascent season of Scottish enlightenment be questioned: the first as the greatest exponent of a largely outdated metaphysical and theological culture which appropriates Newton's teaching for his edifying purposes; the latter as an expression of a scientific culture that seeks a favourable compromise with his own religious tradition. Furthermore, according to this reading, the decisive relationship that both the Scottish culture as a whole, and Hume in particular, entertain with the Newtonian heritage emerges much more clearly. Hume's reticence to comment on the non-methodological aspects of Newton's texts loosens in the *Dialogues*. The return to Cicero or to Galen means the neutralization of the only truly innovative aspect of Newtonian physico-theology, connected to speculations about space and gravitation. The Newtonian science and

⁷⁵ See F. Hutcheson, *A System of Moral Philosophy*, vol. I, chap. ix-x.

the new emerging sciences, from geology to electrology, according to Philo, not only distance the possibility of founding metaphysical speculations on physics, but rather lead to materialistic perspectives. A follow-up to the controversy in the *Dialogues* can be seen in Lord Kames' unsuccessful attempt at reforming Newtonian mechanics. If the result is undoubtedly bankrupt, the intent to free themselves from the limits imposed by Newtonian orthodoxy is commendable, as is the harsh reply by John Stewart, professor of physics in Edinburgh, which involves Hume himself in his criticism. Although Stewart condemns the extremism of Baxter, unlike Maclaurin, he does not recognize autonomy in the *design argument* and, against Hume, attributes to mathematical thought a more decisive role in the interpretation of the physical world; he also reiterates the dogma of the passivity of matter. Along the same lines, common sense is institutionalized by Thomas Reid. It is therefore necessary to review the opinion of Dugald Stewart, according to whom Baxter has "little contributed to the progress of the philosophy cultivated in Scotland"⁷⁶ and not only for his criticisms of Berkeley or the distinction between perception and his object. The distinction between physical and metaphysical causes at which Reid arrives, the devaluation of any physiological or "mechanical" explanation, as well as the role of experience, within the philosophy of perception, the constitution of the philosophy of the mind as a specialized, rigorous field, but sterile of philosophical inquiry, the resumption of the substantialistic conception of reality, the mistrust of the ethics of moral sense, is certainly born in the encounter with Hume's philosophy, but with those metaphysical concerns that had been Baxter's own.

⁷⁶ Stewart, *Works cit.*, I, p. 430.