

ATHEIST THERAPY: RADICAL EMBODIMENT IN EARLY MODERN MEDICAL MATERIALISM¹

– Charles T. Wolfe –

Abstract: Materialism as a doctrine is, of course, a part of the history of philosophy, even if it was often a polemical construct, and it took until the 18th century for philosophers to be willing to call themselves materialists. Difficulties also have been pointed out in terms of “continuity,” i.e., does what Democritus, Lucretius, Hobbes and Diderot have to say about matter, the body and the soul all belong in one discursive and conceptual frame? Interestingly, materialism is also a classic figure in the history of medicine, often intersecting with philosophical considerations. Notably, the question of body-soul relations. This is apparent in Galen’s treatise on body and soul and then much more massively in the early modern period (with reference to Galen, but also Lucretius, and Aristotelian naturalism). In the following essay I reflect on the exact nature of early modern medical materialism, its philosophical status and contribution.

Keywords: Iatromechanism, medical materialism, reductionism, soul (immortality of)

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Introduction

If early modern materialism is typically associated with a set of metaphysical claims about the nature of matter, the mind-body relation, the status of the soul (mortal or immortal), sometimes with ethical consequences such as hedonistic doctrines and/or determinist accounts of behavior, what does it mean to speak of a specifically *medical* materialism in that context? “Medical materialism” is the historian’s name given to versions of philosophical materialism (according to which there is no soul, only body, or no immortal soul, or all mental processes can be explained in corporeal and/or cerebral terms) that specifically invoke or rely on medical information or more broadly a rhetoric of medical authority, according to which the doctor is the professional who is best informed about body-soul relations (better than the theologian or the philosopher). In this essay I reflect on

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¹ An earlier and much shorter version of this paper appeared as an entry in the *Encyclopedia of Early Modern Philosophy of Sciences*, eds. D. Jalobeanu and C. Wolfe, Springer 2021 (those elements are reused here with permission). The present, much longer version works more within the history of philosophy although it makes use of elements from the history of early modern medicine, and brings in the topic of atheism which only appeared tangentially in the earlier entry.

the exact conceptual status of early modern medical materialism, including as a doctrine of embodiment (or better, although cryptic-sounding: of embodiment and reduction).

Early modern medical materialism

Scholars of early modern materialism² have called attention, at least since the pioneering work of Bloch and Thomson (Bloch 1997, Thomson 2008), to the existence of a specifically medical variant of this position, visible in figures like Guillaume Lamy or Julien Offray de La Mettrie, but also in Molière (to whom Bloch devoted a good deal of his later career). This is significant for a variety of reasons: to historians of medicine and intellectual historians, for instance, it is a major instance of the interaction between radical or heterodox intellectual traditions and scientific practices (the latter being understood broadly as including artisanal and vernacular practices); to historians of philosophy, the idea of a specifically medical materialism disturbs assumptions about materialism as synonymous with physicalism. Briefly put, if some forms of materialism are ontologies in which the physical world is all that is real (whether this is specified in Epicurean, Newtonian, Laplacian terms, etc.), medical materialism is a family or ensemble of doctrines in which physics, or something like it, is not directly relevant, because the chief concern is (i) the living body, notably including the issue of (ii) body-soul relations (which by the mid-eighteenth century begin to be called “body-mind” relations, reflecting a process from the later seventeenth century onwards in which various authors, not at all restricted to explicit materialists, state that “soul” may be treated as “mind,” and sometimes even that these are just synonyms³), (iii) how medicine can treat the nature of these relations better or more successfully than traditional metaphysics could, and, by implication, (iv) how medicine thus confirms the truth of materialism, while not necessarily taking the form of or a stand on the physicalists’ austere metaphysics. Forms of materialism espousing (i)–(iv) tend to be less driven by a notion of laws of nature, a foundational ontology of size, shape and motion and particularly physicalistic forms of determinism, while nevertheless retaining a strong reductionist and – differently – determinist emphasis. By “strong” reductionism I mean that even these versions of materialism which seem to focus on specifically living bodies, and on the life sciences rather than the physico-mechanical sciences which were more traditionally a source for materialist arguments, are nevertheless committed to deflationary and at times eliminativist claims of the type “What you call the unique and irreducible properties of the soul, I will show are simply the properties of the living body.” (As a brief point of clarification, while contemporary philosophers may distinguish between reductionism and eliminativism, this distinction does not exist as such in early modern or Enlightenment texts, and indeed, as

² The term “materialist” is used – pejoratively, but in the sense we would recognize today – by Henry More in the 1660s, in English, and by around 1700 by Leibniz in French (although earlier occurrences have been found in the previous decades). See Bloch (1995).

³ Even Mersenne says “l’âme ou l’esprit” (*L’optique et la catoptrique*, I, prop. XXV, in Mersenne 1653: 63). Aram Vartanian comments usefully that “if one conceives of the soul as the effect or function as certain structures of organised matter, it is inevitable that the more legitimate articulation of such a concept occurs through the progress of knowledge regarding anatomical structures themselves, and their modes of operation” (Vartanian 1982: 159–160). For more on the idea of material soul see Wolfe and van Esveld (2014). On body-soul relations in specific medical contexts (not materialist), see Giglioni (1997).

I have discussed elsewhere, authors such as La Mettrie actually waver in different texts between declaring that the soul does not exist, only the body (an eliminativist claim) and that the soul does exist, but as in Epicurus and Lucretius we need to understand it in material terms (a reductionist claim).)

Are these de facto “vital” materialisms, in the sense that their ontology incorporates irreducibly vital properties, e.g., when Maupertuis insists that “molecules,” by which he simply means the microconstituents of living matter, possess “desire, instinct and memory,” or when Diderot describes sensitivity (*sensibilité*) as a universal property of matter?⁴ It seems that this is often the case, although specifically medical materialism, as notably stated by Julien Offray de La Mettrie (1709-1751), tends to deliberately steer clear of foundational ontological claims: La Mettrie often states that as a physician-philosopher (à la Galen, as it were) his concern is living bodies per se, not e.g. the essence of matter. And we would do well to not confuse such “vital materialism” with what might seem like a close relative, namely vitalism: both because the former tends to have an explicit reductionist component and an account of the properties of matter itself (mostly absent in vitalist medical discourse), and because the latter, however strongly organismic it may be, nevertheless is interested in an account of living beings per se, without the often provocative, deflationary, challenging rhetoric and intentions found in materialism in general, including specifically medical materialism.

Medical materialism thus understood appears explicitly in the seventeenth century, in the wake of Descartes and Spinoza, with figures like Regius (Hendrik De Roy, 1598-1679, a physician and Professor of Theoretical Medicine at the University of Utrecht) and the Paris physician Guillaume Lamy (1644-1683). In his *Discours anatomiques* (1675, 2nd revised edition 1679) and especially his *Explication mécanique et physique des fonctions de l'âme sensitive* (1677), Lamy presents a hybrid of Epicurean and mechanistic elements, giving rise to a new form of medically nourished materialism, particularly an Epicurean-materialist theory of soul presented in an anatomical and physiological direction.⁵ This view gains momentum and becomes a self-espoused, self-aware category when received and expanded upon by La Mettrie, and endures at least until the work of Pierre-Jean-Georges Cabanis in the 1800s.⁶

L'Homme-Machine or *Man a Machine* is the best-known work of La Mettrie, a medical doctor and philosopher who was born in Saint-Malo (Brittany) in 1709, and died in 1751 in Berlin – where he was an intellectual-in-residence or perhaps a source of cultural entertainment at Frederick II's court at Potsdam – of ... indigestion, food poisoning, or peritonitis, after having consumed a whole pheasant pasty with truffles. He had been forced to flee from France earlier due to his medical polemics in which he satirized prominent members of that profession, such as the 1746 *Politique du médecin de*

⁴ On Maupertuis, see Wolfe (2010); on Diderot, Wolfe and Shank (2019).

⁵ While I am obviously not trying to provide an exhaustive account of all possible early modern medical materialists, if that were even possible, one might wonder at the absence of the self-proclaimed Epicurean Walter Charleton (1619–1707) here. Booth (2005) asserts several times that Charleton was a materialist, without providing evidence or in fact defining the term (confusingly speaking also of “Cartesian materialism”), and seems to neglect his efforts to follow Gassendi's project of Christianizing Epicurean atomism (compare Levitin (2015): 335–339).

⁶ Kaitaro (2004), Wilson (1997).

Machiavel ou le chemin de la fortune ouvert aux médecins, ouvrage réduit en forme de conseils par le Dr Fum-Ho-Ham et traduit sur l'original chinois par un nouveau maître és arts de S. Cosme, and L'Ouvrage de Pénélope ou Machiavel en médecine (1749-1750), and then from the famously tolerant Low Countries due to his provocative ideas – usually traced back to his classic materialist contribution, *Man a Machine*, but in fact his work of moral philosophy, *Anti-Sénèque*, known in its final title as *Discours sur le bonheur* (*Discourse on Happiness*, 1748-1751), caused immense scandal. His death “by eating” has been described as a “materialist death,” which, combined with the perpetual misinterpretation of his most famous work, earned him much opprobrium and infamy. He seems to have identified, at times in a rather melancholy way, with the figure of the man-machine.

As has been discussed in some important works of scholarship of the past twenty-thirty years (notably by Thomson and Kaitaro, to which I have modestly added), the idea that La Mettrie’s *L’Homme-Machine* (*Man a Machine*) is a statement of “mechanistic materialism” (as many authors, ranging from Marx and Engels to recent scholars, repeat), is a glaring error. No sentence occurs in this works which either (a) reduces the properties of living bodies to the properties of basic, mechanistically specified matter (on the contrary, matter is vital matter for La Mettrie) or (b) makes significant use of analogies with concrete mechanisms like clocks, pulleys, funnels, etc., or even (c) methodically builds on Cartesian animal-machines by treating humans as simply a more complex version of these. The figure of the machine for La Mettrie seems to ultimately mean a deterministically “programmed” organismic system, determined by drives, instincts, affects, appetites, etc. Mechanistic materialism in a medical context can of course be seen as variant on the more common position known as iatromechanism, which is argued over at length in the period (including in the important debate between Hoffmann and Stahl).⁷

I will allow myself a historiographic comment here on the curious fortune of this concept of mechanistic materialism, from Engels to major specialists in the history of materialism itself, such as Olivier Bloch, who presents La Mettrie in this way, as well as to authors such as Roselyne Rey and Jacques Roger. Rey contrasts La Mettrie’s “mechanistic determinism” with the unpredictability of the organism in the sense of the vitalist physicians Bordeu and Ménéret de Chambaud: “La Mettrie misses the specificity of the living,” and Bloch still defends the old thesis of Cartesian mechanistic sources of materialism, which he considers “partially verified” in the case of La Mettrie: “not only by the title of *L’Homme-Machine*, but also by the inspiration, which he claims, of the iatromechanist theories developed, in the wake of Cartesianism, by Boerhaave and expounded at least by the latter’s great disciple, Haller, of whom La Mettrie in his turn gives himself as a disciple.”⁸ Roger refers in a study on iatromechanism to “La Mettrie’s

⁷ King (1963), Andrault (2016).

⁸ Rey (2000): 137; Bloch, “A propos du matérialisme d’Ancien Régime,” in: Bloch (1998): 313–314. The view of La Mettrie as a Cartesian, or at least as transposing Cartesian schema, e.g., the animal-machine, into a materialist framework has been criticized as inadequate since at least the 1980s; notably, La Mettrie’s matter theory is completely un-Cartesian (it’s more Epicuro-Gassendist), and his hedonistic moral theory and account of action are also quite foreign to Cartesian anthropology. That said, Descartes certainly speaks of the paramount importance of medicine, and can be read in a more “embodied” way than standard portrayals of Cartesian dualism, but that would be a different paper from this one: for a start, see Hutchins, Wolfe and Eriksen (2016) and for some discussion of Descartes’ medical ideas, Schmaltz (2016), chapter 5.

traditional mechanicism,” which he also describes as Cartesian and “lacking a future” scientifically; in his classic monograph of 1963, Roger had already stated that “La Mettrie wants to remain a mechanist. This is what prevented him from frankly granting motion and sensibility to matter,” while considering that La Mettrie was inconsistent and obliged to recognize the insufficiencies of his mechanism at least

at the point when he wants to explain the instinct of animals. La Mettrie will then have recourse to Maupertuis, and will grant ‘a certain force that belongs to the smallest parts of which the animal is formed’. . . Which amounts, for La Mettrie, to granting the powerlessness of mechanism on this particular point.⁹

My analysis of the concept of organization in the physiological context (as well as, more generally, of the relations between materialism and vitalism in this period) would tend to show that the concept of (physiological) organization is not the “opposite” of the concept of machine as R. Rey thinks.¹⁰ That is, that “machine” and “organization” (i.e. organism, in language of the period) should not be treated as opposite, but as overlapping models with varying degrees of complexity. And overall, the LaMettrian body-machine bears little resemblance to a Cartesian animal-machine model, aside from rhetorical posturing on the former’s part; his matter theory is not the same (it is more Epicurean); he is not committed to an overall ontological mechanistic account; furthermore, his account of body and embodiment is strongly colored by his *medical* outlook (including in the sense that he does not explain bodily functioning in terms of ultimate laws of nature but in terms of specific bodily processes, in a manner reminiscent of Claude Bernard a century later).¹¹

It is worth noting that in this period, extending into the late eighteenth century, authors such as Antoine Le Camus and Cabanis explicitly call for a medical “filling in of the blanks” left by Locke on the neurophysiological underpinnings of mental processes, often with an explicit invocation of materialism. In his 1753 *Médecine de l’Esprit*, Le Camus praises Locke by name, calling him the “Chef des Philosophes” and asserting that knowledge comes from the senses, but regrets that Locke left out all the anatomical and physiological detail of how the senses work, which Le Camus claims he will provide.¹² Some fifty years later, in his influential *Rapports du physique et du moral* (1802, based on lectures given in the 1790s), Cabanis reprises this idea of a Locke who is the great predecessor of a kind of sensationist-based, medically informed materialism, but who needs to be supplemented in precisely the latter terms. He referred to Locke as a physician¹³ but mainly discussed the doctrines of sensation in Locke and Condillac and commented that they were only missing a proper study of the structures and functions that subtend the senses, basically, the brain.¹⁴ What is striking, at least to me, in those

⁹ Roger, “La conception mécaniste de la vie,” in: Roger (1995): 183; Roger (1963): 489–490; Barsanti speaks of “the mechanist La Mettrie” (Barsanti 1995: 200).

¹⁰ Wolfe (2017).

¹¹ Huneman and Wolfe (2017).

¹² Le Camus (1753), chapter 1, § 1.

¹³ Cabanis (1956): Premier mémoire.

¹⁴ Ibidem: 141, 165, 196, etc.; for further discussion of these cases see Wolfe (2016) and the interesting if brief comments in Wilson (1997).

texts, is that this medical reading of Locke is sketching out a program for what later philosophers might call the naturalization of the mind, i.e., the reconfiguration of the mind so that it becomes a legitimate object of science.¹⁵ While Locke was certainly not claiming any atheist dimensions or consequences from his empiricism – quite the contrary – his followers, particularly in the French Enlightenment, made such dimensions explicit (including in the well-known thinking matter debates)¹⁶; the medical version thereof is a less-known sub-species of this “materialization” of empiricism.

The doctor as atheist: an ancient idea

Yet the idea of the doctor as materialist goes back much earlier, to rumors and accusations about Galen and the figure of the doctor as atheist.¹⁷ Galen’s treatise *Quod animi mores*, sometimes rendered as “On the soul’s dependence on the body”¹⁸ was central to this dispute. Here, Galen writes that the character or “substance of soul” is determined by, or “follows upon” the mixture of elements in the body (*kraseis*: also “temperaments”; *krasis* is usually translated as “blending” or “mixture,” in the sense that our temperament is the result of a given humoral mixture, hence terms such as “idiosyncrasy,” *idiosunkrasia*). The body in turn depends on diet and daily activities. The soul has three faculties (*dunameis*) that have their seats in specific bodily organs (and Galen interestingly suggests that the physician should emphasize these bodily organs while the philosopher, like Plato, would emphasize powers of the soul).¹⁹ More provocatively, Galen can be understood to affirm that soul and its parts actually *are* the temperaments of organs in which they reside: the mortal part of the soul (although he is at best agnostic, and in fact skeptical regarding the immortal part) is just “the mixture of the body.”²⁰ Thus, even if there were a “separate substance” for the soul, it would still be dependent on (“a slave to”) the mixtures of the body.²¹

Such discussions of a communicability or even an *identity* between body and soul via humors may appear to run the risk of a dangerous kind of *category mistake*, shifting terrain from empirical medico-anatomical considerations to traditional metaphysics and theology. (I say “communicability or identity” because this ambiguity is present in Galen’s account itself in *Quod animi mores*, as briefly summarized above: is the soul the “result” or “consequence” of organic mixtures (*krasis*) or is it *that mixture itself*?) While Galen himself did not make any overt *philosophically* reductionist claims (as distinct from claiming to

¹⁵ Wolfe (2021).

¹⁶ To be clear, I am not at all suggesting that Locke is a hidden atheist, à la Strauss. Locke’s commitments to an admittedly purified and idiosyncratic form of Christianity are hard to miss, or to wave away. What is curious, though, is the warmth he expresses in his correspondence with Anthony Collins, including towards Collins’ own politico-theological projects of the more deist sort (even though, to complicate matters, Locke also denounces Toland on these grounds...). Locke wrote to Collins that “though he [sc. Toland] has parts yet that is not all which I require in an Author I am covetous of, and expect to find satisfaction in” (letter of February 28th 1704, n° 3474 in Locke 1976–1989, vol. 8: 217).

¹⁷ Wolfe (2015).

¹⁸ Galen (1997): 150–176.

¹⁹ Hankinson (1991).

²⁰ Galen (1997): 153, 157.

²¹ Ibidem, 155.

provide a *medically* reductionist account²²), in an early modern context these ideas, whether directly quoted or modified, sound quite different, e.g., when the Gassendist François Bernier suggested that “it would appear that Galen was persuaded the Soul was a spirit that emerged out of the blood,”²³ or when Thomas Browne, in his celebrated *De religio medici* (1643), a text which begins with Browne regretting rumors of doctors being atheists as the “general scandal of my Profession,”²⁴ alludes to the “wrong” sort of influence Galen could have: “I remember a Doctor in Physick, of Italy, who could not perfectly believe the immortality of the soul, because Galen seemed to make a doubt thereof.”²⁵

Browne was willing to accept the Galenic “evidence” that the soul, for “the performance of her ordinary actions,” requires both a “symmetry and proper disposition of organs” and a “crasis [i.e. *krasis*] and temper correspondent to its operations,” but he nevertheless considered that all of this “flesh” was the “instrument” of the soul, not the soul itself.²⁶ This fear of contamination, disguised as a diagnosis of a category mistake, was justified if we consider the legacy of Galenic humoralism as “humoral materialism,”²⁷ for in addition to the blurring of “disciplinary” discursive boundaries between medicine and philosophy, it challenges one of the more powerful arguments in favor of substance dualism: the non-communicability or at least radical separation of thinking substance and extended substance, or more aptly put, of soul and body.²⁸

The example of Galen as a very prominent figure, both eminently respectable and potentially materialist, indicates that the figure of the *medical* materialist – or differently put, of the doctor who is a materialist (and an atheist) *because* s/he is a doctor – may be just as old as that of the *philosophical* materialist. At the least, the early modern rhetoric in which materialism as identified both with atheism and with a kind of dangerous reductionism targeting entities like the immortal soul or human faculties like free will appears a very old trope. There is also a back-and-forth relation, with self-proclaimed

²² The old distinction, sometimes associated with Avicenna, between the *via medicorum* and the *via philosophorum* including with reference to Galen, can be useful here if we take it to emphasize that there is a key ‘categorical’ difference between reductionist anatomical or physiological claims at the strictly medical level, and reductionist claims about soul and body at the metaphysical level (compare Giglioni 2018). Thinkers as different as Descartes and Kant (contra Soemmering), and in a different context, Haller and Bonnet will concur here, that it is fine to provide an empirical account of e.g., the nervous system, but not fine at all to claim that this account is explanatory (and reductive) with regard to the soul.

²³ Bernier (1678), vol. V: 452.

²⁴ Browne (1892), § I, 1.

²⁵ Ibidem, § XXI: 45.

²⁶ Browne (1892), § XXXVI: 78. An anonymous reviewer suggests that this more materialist “persona” of Galen in the early modern period is an effect of the shift from qualitative to quantitative change as an issue. While the vision of a universe of inert, dead matter, i.e., pure quantity and mass without life or animation, is frequently invoked in antimaterialist argumentation of the period (e.g., by Cambridge Platonists such as Henry More and Ralph Cudworth), it is Hobbes who is the target. A humoral materialism like Galen’s does not seem to be the issue here.

²⁷ Paster (1997), Sutton (2007).

²⁸ That Descartes himself ultimately, in the context of his exchange with Elisabeth, came to articulate the idea of a “substantial union” of the two substances, and a philosophy of the passions, is well-known and from the standpoint of the present paper, is another important component in our rethinking the landscape of embodiment in early modern thought (see, again, Hutchins, Wolfe and Eriksen 2016); but it does not belong to medical materialism proper.

materialists such as La Mettrie invoking their status as medical practitioners as a way of legitimizing their views. For when La Mettrie argues for the identity between mental and cerebral processes (or, more often, the dependency of the former on the latter, although he can and does simply identify them as well), he does not just do so by debating with claims from Plato, Descartes or Leibniz (or conversely, by defending ideas from Lucretius, Gassendi or Spinoza in his idiosyncratic version). Identity-type statements abound in La Mettrie, e.g., in *L'Homme-Machine*:

The soul is just a pointless term of which we have no idea and which a good mind should only use to refer to that part of us which thinks. Given the slightest principle of movement, animate bodies will have everything they need to move, feel, think, repent and in a word, behave in the physical realm as well as the moral realm which depends on it.²⁹

But La Mettrie insists that such statements gain credence from the fact that he possesses additional and uniquely relevant expertise as a doctor: “the best philosophy is that of the doctors,” and doctors should be “the only philosophers to whom their homeland should be grateful.”³⁰ Philosophers as different as Plato and Spinoza claimed to be providing a kind of therapy, and celebrated physicians like Galen claimed to be providing not just care of the body but care of the whole person (like the philosopher); La Mettrie is a rare, perhaps unique case of someone who sees it going both ways. Doctors should be the only philosophers to whom their homeland is grateful, but also, perennial metaphysical debates on body-soul debates should be resolved by doctor-philosophers, because doctors possess knowledge of the workings of the body (and by extension, of health, sickness and mortality and thus the possibilities for a good life) and of body-soul relations in not just a “philosophy of mind” sense but morally...

Strands of medical materialism: Cartesian, Spinozist, other

The most common strategy of the physician when seeking to demonstrate their expertise in philosophy (or, which is not quite the same thing, to construct a form of legitimacy in philosophical discourse) was to present knowledge of the structure of the body (thus anatomy in particular) as supporting claims about knowledge of *design*. This was a standard early modern trope, actively promoted for instance by Robert Boyle, who pointed to William Harvey’s discovery of the circulation of the blood:

When I asked our famous Harvey... what were the things that induced him to think of a circulation of the Blood, he answered me, that when he took notice that the valves in the veins of so many several parts of the body, were so placed that they gave free passage to the blood towards the heart, but opposed the passage of the venal blood the contrary way: he was invited to imagine, that so provident a cause as nature had not plac’d so many valves *without design*.³¹

²⁹ La Mettrie (1987), I: 98.

³⁰ *Discours sur le bonheur* and *L'Homme-Machine*, respectively: in La Mettrie (1987), vol. 2: 36 and vol. 1: 62.

³¹ Boyle (1968), V: 427.

But the physician's knowledge of the body could also support the claim that there is no immortal soul (Lamy, La Mettrie); i.e., that there may exist a material soul, that dies with us, as doctors claim to have observed.³² The idea of the material soul is not restricted per se to medical materialism, but it tends to be significantly "nourished" by language derived from Galenic, humoral, Epicurean, chymiatric medicine ... and more broadly by naturalistic and indeed mortalist visions of the soul propounded by the Paduan "materialist" Aristotelians such as Pomponazzi and Cremonini.³³

Of course, depending on their own ideological convictions, physicians can either claim that on the Last Judgment we are resurrected as a whole (body and soul), which does not resemble most definitions of materialism but could certainly have been treated as such at the time (heterodox certainly, materialist possibly) or, in proper Lucretian fashion, that we need have no fear because afterwards there is – nothing. The Epicurean strand of medical materialism, influenced also by Pierre Gassendi (who is sometimes referred to as a doctor, e.g., by La Mettrie)³⁴ elaborated on Renaissance ideas of a material soul, according to which (in the rendition of one clandestine anonymous manuscript from the 1720s), "the human soul is material, and is made up of the most subtle parts of the blood."³⁵ Gassendi emphasized that even morals might fall under the purview of the Epicurean physician, who knows the functioning of body and mind better than anyone else.³⁶ While I have tried to maintain a distinction between specifically medical materialism and more familiar kinds of philosophical materialism (the former does not seek to provide an account of the origins of the universe, or the nature of matter itself, although it overlaps strongly with the latter on issues like the mortality or immortality of the soul), it is also the case, as we can see with the above example of early modern Epicurean medicine, that the former is used to address debates in the latter context.

Unsurprisingly, early modern medical materialism, like early modern materialism in general, includes different tendencies, some more Cartesian (in which considerations on the union and/or the passions slowly overwhelm the dualism, and allow the physiological "blanks" to be filled in), some more Epicurean. A notorious instance of the Cartesian trend towards medical materialism was Regius, who was initially close to Descartes but controversially asserted that the soul could be a mode of the body, with the body being understood as a machine, and the human mind, inasmuch as it exists in a body, understood as simply organic or organized matter (not to be confused with an Aristotelian idea of "ensouled matter").³⁷ Regius's ideas indicate that one doesn't *have*

³² Coward (1702), discussed in Thomson (2008).

³³ Following the Lateran Council in 1513 and the renewed discussions of the soul, Pomponazzi (in his 1516 treatise on the immortality of the soul) and the "radical" Aristotelians argued that the activities of the soul depend upon the body and its organs according to Aristotle, and thus the soul is mortal and must perish when the body dies. One might also find elements of the medical materialist position in Santorio, who was Regius's teacher (see Bitbol-Hespériès 1993: 66–67 and Barry and Bigotti (eds.) 2022), although I am not aware of Santorio engaging directly with such questions (I thank an anonymous reviewer for this suggestion). For more on Pomponazzi on this issue see Pine (1986), esp. ch. 2 and Mitrovic (2009).

³⁴ See Wolfe (2009).

³⁵ Anon. (2003): 228; see generally Garber (1998), including specifically on the idea of *flos materiae*.

³⁶ Wolfe (2009), Wolfe and van Esveld (2014).

³⁷ Regius (1646): 248, 246; see Alexandrescu (2013) and Schmaltz (2016), chapter 5.

to go through medicine to get to this materialist claim, but medicine – or a certain *idea of medicine* – helps a lot (e.g., deathbed stories in which the physician declares that s/he has never seen the soul leave the body), and indeed it would be short-sighted to neglect the role of Regius’s medical training here. Regius, like Boerhaave (and later Lamy and La Mettrie) is adamant that the approach of the physician implies that any consideration of first causes be bracketed off – either because it simply is not within their professional remit as physicians, as Haller will also say prudently, or implicitly because they feel that such issues are genuinely to be discarded. These two distinct versions of the medical-materialist dismissal of first causes might be understood as “weakly materialist” and “strongly materialist,” respectively.

Sometimes these trends – Cartesian, Epicurean and others – are combined more or less deliberately, as in La Mettrie.³⁸ It may seem surprising that such views were sometimes called Spinozist, given that nowhere in Spinoza is there any kind of “biologistic” or “embodied” emphasis on living beings as possessed of a unique set of properties or powers³⁹ – although the “modal” interpretation (soul as mode of body) offers a way of fleshing that out in Spinozistic terms. For instance, the great Dutch physician and professor of medicine Herman Boerhaave – “*Communis Europae Praeceptor*” – was accused of being a Spinozist (partly due to his funeral oration).⁴⁰ But clearly, in the eighteenth century, there was a kind of ready-made Spinozism which seemed to be a philosophy tailor-made to the developments in the life sciences, whether or not it was fair to accuse, say, Boerhaave of Spinozism, or whether La Mettrie is a Spinozist in the restrictive sense defined by extensive acquaintance with Spinoza’s system.⁴¹ That is, a certain idea of Spinozism was associated with more or less experimental inquiries into the connections between mind and body, regardless of whether the authors in question engaged in detail with Spinoza’s metaphysics.

Yet sometimes medical materialism was a kind of inadvertent invention. Thus Jerome (Hieronymus) Gaub (1705–1780), a student of Boerhaave’s who took over his Chair at the University of Leiden, gave a lecture in 1747 which La Mettrie claimed to have attended (some months prior to finishing *L’Homme-Machine*), entitled *De regimine mentis*.⁴² Here, Gaub laid the ground for a clinical perspective on the problem of mind-body interaction. La Mettrie spoke favorably about the ideas he heard there, and his enthusiasm makes sense, for Gaub had argued that the metaphysical distinction between mind and body was irrelevant for the physician. “Although the healing aspect of medicine properly looks toward the human body only, rather than the whole man, it does refer to a *body closely united to a mind* and, by virtue of *their union*, almost continually acting on its companion as well as being itself affected in turn”.⁴³ He also described Descartes, “the most ingenious philosopher of his age,” as having “yielded to physicians” as to the priority of medicine in these matters,⁴⁴ referring to the well-known passage in the 6th Part

³⁸ Lo Presti (2010).

³⁹ Andrault (2019).

⁴⁰ Wolfe (2014): 199n69.

⁴¹ Wolfe (2014), Citton (2006).

⁴² Translated in Rather (1965).

⁴³ Gaub (1747), in Rather (1965): 70, emphasis mine.

⁴⁴ Ibidem, 74.

of the *Discourse on Method* where Descartes praises medicine.⁴⁵ Gaub adds that due to the variability of bodily temperaments, itself explainable in humoral terms, the philosopher “cannot dispense with the aid of the physician” where the mind is concerned.⁴⁶ But all the same he was horrified at the idea that his position could be characterized as materialism, and strongly rejected La Mettrie’s enthusiastic offers of intellectual friendship.⁴⁷

Conclusion

Historians of philosophy have been known to overlook early modern medical materialism, for instance as regards debates on the status of the soul⁴⁸ and it can appear far removed from traditional debates on mind-body dualism, given that it recognized what Montaigne called “the tight weave of the mind and the body.”⁴⁹ That is, ordinary history of philosophy tends to focus on issues like monism, dualism, epiphenomenalism – but this approach masks a much more hybrid, bastardized, and *embodied* reality on the ground,⁵⁰ including with the recurrent “ideological” dimension of atheism added.

The reductionist approach of a medical materialism will not be identical to the sort of reductionism associated with a physicalist ontology like Hobbes’,⁵¹ since it will explain thought by bodily or cerebral-corporeal processes, and not by a fundamental physics of micro-motions (I am not saying that the reductionist ideas characteristic of medical materialism are “embodied” while more physicalistic ideas belong to *philosophical* materialism, for the materialism of a La Mettrie or a Diderot, who self-define as philosophers while deriving many ideas from their medical reading, is precisely not of the latter, physicalist sort). Take the anonymous clandestine manuscript *L’Âme Matérielle*, which has been dated to approximately 1725-1730 by its modern editor, Alain Niderst: it argues in detail for a medico-philosophically materialist account of human life, in reductive terms, in which the lower-level “reducing theory” is an ensemble of physiology, anatomy, somewhat speculative neurophysiology, etc.:

Can man interrupt the emotions of spirits and blood, or the perturbations of the brain, precipitated by [external] objects? It is false, then, to claim that it is up to us to be happy, wise, or free; none of this is up to us. Our happiness, wisdom and freedom are dependent on the motion of the animal spirits which we do not control, and these motions of the spirits cause the emotions in our soul. None of this is free, nor can it be prevented; otherwise, we would have to modify the constitution of our bodies, and the determination of the motion of the spirits, which is a natural and necessary effect of the wise and admirable construction of our bodies.⁵²

⁴⁵ Descartes names medicine as the most useful way of “making men wiser and more skilful than they have been up till now,” and freeing us from infirmities mental and physical: AT VI: 62–63.

⁴⁶ Gaub (1747), in Rather (1965): 86.

⁴⁷ Vila (1998): 82, Wolfe (2016).

⁴⁸ Henry (1989): 92–93.

⁴⁹ Montaigne (1992), I: 21.

⁵⁰ It is also possible to see *specifically medical* versions of dualism, including substance versus function dualism: Wright (2000).

⁵¹ Duncan (2022).

⁵² Anon. (2003): 182; for more on this text see Wolfe and van Esveld (2014), section 7.

I realize that medical discourse can be used in broadly reductive terms as applied to all sorts of human phenomena, including emotions, valuative choices, political motives, free action and the like. This is particularly striking in a slightly later period, in the nineteenth century, when it became popular to write “Physiologies” of different objects,⁵³ which purported to explain social and emotional phenomena in physiological terms. But the sense of reductionism I find to be relevant (and interesting) when dealing with medical *materialism* is more restrictive, as an ontological reductionism, as it is focused on body-soul relations – although it is perfectly possible that 200 years after Regius and Lamy, and 100–120 years after La Mettrie, this gets broadened and dissolved into various social discourses, which however are not my concern here (work on Cabanis, Lamarck and the Idéologues comes to mind, for those who are more interested in these bio-social issues).

Just as the approach to *body* in medical materialism did not seek to reduce bodily processes and functions to “basic physics” (not least because such versions of reduction seem to be a later coinage), the same holds for the approach to *mind*: rather than being reduced to micro-components of inert matter, it was also understood as *animal spirits*, “tiny messengers” bearing information materially through the body; matter’s smallest parts might indeed have had minds, desire, memory, if not personhood – although this is not true of all accounts of animal spirits, of course.⁵⁴ La Mettrie, the author of perhaps the most provocative materialist work ever written, *Man a Machine* (1748), spoke elsewhere, in his medical commentaries, of the mind’s “corporeal nature,”⁵⁵ although when he uses this phrase, it is not to say that the mind “just is body” and nothing else besides, but to reassure us that we should not fear wholesale loss of personhood and value just because the mind turns out to be corporeal in nature. Diderot, in his late manuscript on “physiology” and its conceptual ramifications, imagines what he calls a “physical medicine”: since “every sensation and every affection is corporeal, it follows that there is a physical medicine which is equally applicable to the body and the soul.”⁵⁶ These and other highly provocative materialist claims made by well-known figures in the history of philosophy speak to the significance of early modern medical materialism.

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⁵³ E.g., the physiology of marriage, see Rigoli (2013).

⁵⁴ Sutton (1998), Wolfe (2018).

⁵⁵ La Mettrie (1747): 111.

⁵⁶ Diderot (1975-), vol. XVII: 512; Rey (1985).

References

- Alexandrescu V. (2013), "Regius and Gassendi on the Human Soul," *Intellectual History Review* 23 (4): 433–452.
- Andrault R. (2016), *La raison des corps. Mécanisme et sciences médicales*, Vrin, Paris.
- Andrault R. (2019), "Spinoza's Missing Physiology," *Perspectives on Science* 287 (2): 214–243.
- Anon. (2003), *L'Âme Matérielle* (approx. 1725–1730), A. Niderst (ed.), 3rd edition, H. Champion, Paris.
- Barry J., Bigotti F. (eds.) (2022), *Santorio Santori and the Emergence of Quantified Medicine, 1614–1790: Corpuscularianism, Technology and Experimentation*, Palgrave Macmillan, Cham.
- Barsanti G. (1995), "La naissance de la biologie: observations, théories, métaphysiques en France 1740–1810," [in:] *Nature, Histoire, Société: essais en hommage à J. Roger, C. Blankaert, J.-L. Fischer, R. Rey* (eds.), Klincksieck, Paris: 197–227.
- Bernier F. (1678), *Abregé de la philosophie de Mr. Gassendi*, 8 vols., Anisson et Possuel, Lyon.
- Bitbol-Hespériès A. (1993), "Descartes et Regius: Leur pensée médicale," [in:] *Descartes et Regius: Autour de l'Explication de l'esprit humain*, T. Verbeek (ed.), Rodopi, Amsterdam: 47–68.
- Bloch O. (1995), *Le matérialisme*, 2nd edition, PUF (Que sais-je?), Paris.
- Bloch O. (1998), *Matière à histoires*, J. Vrin, Paris.
- Booth E. (2005), *A Subtle and Mysterious Machine. The Medical World of Walter Charleton (1619–1707)*, Springer, Dordrecht.
- Boyle R. (1965), *The Works of the Honourable Robert Boyle (1772)*, T. Birch (ed.), 6 vols., London, reprint, Olms, Hildesheim.
- Browne T. (1892), "Religio Medici" (1643), [in:] *Writings of Sir Thomas Browne*, D. Lloyd Roberts (ed.), David Stott, London.
- Cabanis P.J.G. (1956), *Rapports du physique et du moral de l'homme* (1802), [in:] *Œuvres philosophiques*, C. Lehec, J. Cazeuue (eds.), 2 vols., PUF, Paris: vol. 1.
- Citton Y. (2006), *L'Envers de la Liberté. L'invention d'un imaginaire spinoziste dans la France des Lumières*, Éditions Amsterdam, Paris.
- Coward W. (1702), *Second Thoughts on Human Soul*, R. Basset, London.
- Descartes R. (1964–1974), *Œuvres*, C. Adam, P. Tannery (eds.), 11 vols., J. Vrin, Paris (cited as AT followed by volume and page number).
- Diderot D. (1975–), *Œuvres complètes*, H. Dieckmann, J. Proust, J. Varloot (eds.), Hermann, Paris.
- Duncan S. (2022), *Materialism from Hobbes to Locke*, Oxford University Press, Oxford.
- Galen (1997), *Selected Works*, P.N. Singer (ed., trans.), Oxford University Press, Oxford.
- Garber D. (1998), "Soul and Mind: Life and Thought in the Seventeenth Century," [in:] *The Cambridge History of Seventeenth-Century Philosophy*, vol. 1, D. Garber, M. Ayers (eds.), Cambridge University Press, Cambridge: 759–795.
- Giglion G. (1997), "The Machines of the Body and the Operations of the Soul in Marcello Malpighi's Anatomy," [in:] *Marcello Malpighi: Anatomist and Physician*, D. Bertoloni Meli (ed.), Leo S. Olschki, Florence: 149–174.
- Giglion G.M. (2018), "Medical Approaches to the Mind in the Late Middle Ages and the Renaissance," [in:] *Philosophy of Mind in the Late Middle Ages and Renaissance*, vol. 3: *The History of the Philosophy of Mind*, S. Schmid (ed.), Routledge, London: 41–62.
- Hankinson R.J. (1991), "Galen's Anatomy of the Soul," *Phronesis* 36 (2): 197–233.

- Henry J. (1989), "The Matter of Souls: Medical Theory and Theology in Seventeenth-Century England," [in:] *The Medical Revolution of the Seventeenth Century*, R.K. French, A. Wear (eds.), Cambridge University Press, Cambridge: 87–113.
- Huneman P., Wolfe C.T. (2017), "Man-Machines and Embodiment: From Cartesian Physiology to Claude Bernard's 'Living Machine'," [in:] *Embodiment*, J.E.H. Smith (ed.), Oxford University Press (Oxford Philosophical Concepts), Oxford: 257–297.
- Hutchins B., Wolfe C.T., Eriksen C.B. (2016), "The Embodied Descartes: Contemporary Readings of *L'Homme*," [in:] *Descartes' Treatise on Man and its Reception*, D. Antoine-Mahut, S. Gaukroger (eds.), Springer, Dordrecht: 287–304.
- Kaitaro T. (2004), "Brain-Mind Identities in Dualism and Materialism: A Historical Perspective," *Studies in History and Philosophy of Biological and Biomedical Sciences* 35: 627–645.
- King L.S. (1963), "Stahl and Hoffmann: A Study in Eighteenth-Century Animism," *Journal of the History of Medicine* 37: 15–24.
- La Mettrie J.O. de, Boerhaave H. (1747), *Institutions de médecine de M. Hermann Boerhaave*, trans. with commentary by La Mettrie, 2nd edition, vol. 5, Huart & Cie, Paris.
- La Mettrie J.O. de (1987), *Œuvres philosophiques*, F. Markovits (ed.), 2 vols., Fayard-"Corpus", Paris.
- Lamy G. (1996), *Discours anatomiques. Explication mécanique et physique des fonctions de l'âme sensitive*, A. Minerbi Belgrado (ed.), Voltaire Foundation, Oxford.
- Le Camus A. (1753), *Médecine de l'esprit, où l'on traite des dispositions et des causes physiques qui sont des conséquences de l'union de l'âme avec le corps, influant sur les opérations de l'esprit; et des moyens de maîtriser ses opérations dans un bon état ou de les corriger quand elles sont viciées*, Ganeau, Paris.
- Levitin D. (2015), *Ancient Wisdom in the Age of the New Science: Histories of Philosophy in England, c. 1640–1700*, Cambridge University Press, Cambridge.
- Locke J. (1976–1989), *The Correspondence*, E.S. De Beer (ed.), 8 vols., Clarendon Press, Oxford.
- Lo Presti R. (2010), "La machine plus que machine ou l'automate transfiguré. L'anthropologie de J.O. de La Mettrie et la réinvention du mécanisme médical," *Gesnerus* 67 (2): 163–187.
- Mersenne M. (1653), *La perspective curieuse du R. P. Nicéron, Minime divisée en quatre livres avec l'Optique et la Catoptrique du R. P. Mersenne, ... du même ordre, mise en lumière après la mort de l'auteur*, J. du Puis, Paris.
- Mitrovic B. (2009), "Defending Alexander of Aphrodisias in the Age of the Counter-Reformation: Iacopo Zabarella on the Mortality of the Soul according to Aristotle," *Archiv für Geschichte der Philosophie* 91: 330–354.
- Montaigne M. de (1992), *Essais* (1588, 1595), P. Villey (ed.), 3 vols., PUF, Paris.
- Paster G.K. (1997), "Nervous Tension: Networks of Blood and Spirit in the Early Modern Body," [in:] *The Body in Parts. Fantasies of Corporeality in Early Modern Europe*, D. Hillman, C. Mazzio (eds.), Routledge, London: 107–125.
- Pine M.L. (1986), *Pietro Pomponazzi, Radical Philosopher of the Renaissance*, Antenore, Padua.
- Rather L.J. (1965), *Mind and Body in Eighteenth-Century Medicine. A Study Based on J. Gaub's 'De regimine mentis'*, University of California Press, Berkeley, Los Angeles.
- Regius H. (1646), *Fundamenta physices*, Elsevier, Amsterdam.
- Rey R. (1985), "Diderot et la médecine de l'esprit," [in:] *Denis Diderot, 1713–1784, Colloque international*, A.-M. Chouillet (ed.), Aux Amateurs de Livres, Paris: 287–296.

- Rey R. (2000), *Naissance et développement du vitalisme en France de la deuxième moitié du XVIII^e siècle à la fin du Premier Empire*, Voltaire Foundation, Oxford (originally a PhD dissertation in 3 vols., University of Paris, 1987).
- Rigoli J. (2013), "The 'Novel of Medicine'," [in:] *Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800–2010*, S. Normandin, C.T. Wolfe (eds.), Springer, Dordrecht: 77–102.
- Roger J. (1963), *Les sciences de la vie dans la pensée française du XVIII^e siècle. La génération des animaux de Descartes à l'Encyclopédie*, Armand Colin, Paris (reprinted Albin Michel 1995).
- Roger J. (1995), *Pour une histoire des sciences à part entière*, C. Blanckaert (ed.), Albin Michel, Paris.
- Schmaltz T.M. (2016), *Early Modern Cartesianisms: Dutch and French Constructions*, Oxford University Press, Oxford.
- Sutton J. (1998), *Philosophy and Memory Traces: Descartes to Connectionism*, Cambridge University Press, Cambridge.
- Sutton J. (2007), "Spongy Brains and Material Memories," [in:] *Environment and Embodiment in Early Modern England*, M. Floyd-Wilson, G. Sullivan (eds.), Palgrave Macmillan, London: 14–34.
- Thomson A. (2008), *Bodies of Thought: Science, Religion, and the Soul in the Early Enlightenment*, Oxford University Press, Oxford.
- Vartanian A. (1982), "Quelques réflexions sur le concept d'âme dans la littérature clandestine," [in:] *Le matérialisme du XVIII^e siècle et la littérature clandestine*, O. Bloch (ed.), Vrin, Paris: 149–165.
- Vila A.C. (1998), *Enlightenment and Pathology. Sensibility in the Literature and Medicine of 18th Century France*, Johns Hopkins University Press, Baltimore.
- Wilson C. (1997), "Between *Medicina Mentis* and Medical Materialism," [in:] *Logic and the Workings of the Mind*, P.A. Easton (ed.), Ridgeview, Atascadero: 237–253.
- Wolfe C.T. (2009), "A Happiness Fit for Organic Bodies: La Mettrie's Medical Epicureanism," [in:] *Epicurus in the Enlightenment*, N. Leddy, A. Lifschitz (eds.), Voltaire Foundation, Oxford: 69–83.
- Wolfe C.T. (2010), "Endowed Molecules and Emergent Organization: The Maupertuis-Diderot Debate," *Early Science and Medicine* 15: 38–65.
- Wolfe C.T. (2014), "Epigenesis as Spinozism in Diderot's Biological Project," [in:] *The Life Sciences in Early Modern Philosophy*, O. Nachtomy, J.E.H. Smith (eds.), Oxford University Press, Oxford: 181–201.
- Wolfe C.T. (2015), "*Tres medici, duo athei?* The Physician as Atheist and the Medicalization of the Soul," [in:] *Early Modern Medicine and Natural Philosophy*, P. Distelzweig, B. Goldberg, E. Ragland (eds.), Springer, Dordrecht: 343–366.
- Wolfe C.T. (2016), "The 'Physiology of the Understanding' and the 'Mechanics of the Soul': Reflections on Some Phantom Philosophical Projects," *Quaestio* 16: 3–25.
- Wolfe C.T. (2017), "Models of Organic Organization in Montpellier Vitalism," *Early Science and Medicine* 22: 229–252.
- Wolfe C.T. (2018), "Material-Cerebral Plasticity, Fluid Ontology: The Case of Animal Spirits," *Epistémocritique*: 95–112.
- Wolfe C.T. (2021), "Locke and Projects for Naturalizing the Mind in the 18th Century," [in:] *The Lockean Mind*, J. Gordon-Roth, S. Weinberg (eds.), Routledge, London: 152–163.
- Wolfe C.T., Shank J.B. (2019), "Diderot," *Stanford Encyclopedia of Philosophy*, URL = <https://plato.stanford.edu/entries/diderot/> [Accessed 29.08.2023].

- Wolfe C.T., van Esveld M. (2014), "The Material Soul: Strategies for Naturalising the Soul in an Early Modern Epicurean Context," [in:] *Conjunctions of Mind, Soul and Body from Plato to the Enlightenment*, D. Kambaskovic (ed.), Springer, Dordrecht: 371–421.
- Wright J.P. (2000), "Substance vs. Function Dualism in Eighteenth-Century Medicine," [in:] *Psyche and Soma. Physicians and Metaphysicians on the Mind–Body Problem from Antiquity to the Enlightenment*, J.P. Wright, P. Potter (eds.), Clarendon Press, Oxford: 237–254.