

This article is part of the first volume of the
International Review of Eighteenth-Century Studies (IRECS),
ISSN 1797-0091 (pdf), titled
Boundaries in the Eighteenth Century – Frontières au dix-huitième siècle
and edited by Pasi Ihalainen *et alii*,
ISBN 978-952-99901-0-8 (pdf).

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The entire volume is available at
<http://www.helsinki.fi/historia/1700/irecs-rieds/>

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the International Society for Eighteenth-Century Studies
<http://www.isecs.org/>

Helsinki & Oxford

2007

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**Determinism/spinozism
in the radical Enlightenment: the cases of
Anthony Collins and Denis Diderot**

Introduction

‘Frontier perspectives’, in current sociological or social-historical language, are a family of approaches in which the relevant unit of analysis is frontiers, that is, social, political, or economic interactions at the ‘edges’ of different states. If the frontier becomes the relevant unit even in a comparative analysis – so the suggestion goes – then we no longer need to have a nationalist historiography, an analysis in terms of nations or states.¹ If we turn towards the discipline which concerns us here, intellectual history, Jonathan Israel has recently proposed his own supra-national account of what he calls, after Margaret Jacob, the ‘radical Enlightenment’² – basically, Spinozism without Spinoza, or in other words, ‘Spinosisism’ with an ‘s’ rather than a ‘z’, as a pan-national, underground intellectual movement throughout the Enlightenment. This is not the actual, textually complete Spinozist doctrine, but rather the collection of re-

1. Peter C. Perdue, ‘A frontier view of Chineseness’, in *The resurgence of East Asia: 500, 150 and 50 year perspectives*, eds G. Arrighi, T. Hamashita & M. Selden (London, 2003), p. 51.

2. Jonathan Israel, *Radical Enlightenment: Philosophy and the making of modernity 1650–1750* (Oxford, 2001). The idea of distinguishing between Spinozism with a ‘z’ and Spinosisism with an ‘s’ (as in the *Encyclopédie* article ‘SPINOSISTES’) was suggested by Ann Thomson at the conference on radical Enlightenment held at the ENS (Lyon) in February 2004, the proceedings of which are forthcoming: *Qu’est-ce que les Lumières « radicales » ? Libertinage, athéisme et spinozisme dans le tournant philosophique de l’Âge classique*, dir. C. Secretan, T. Dagron & L. Bove (Paris, 2007).

verberations of various second-hand appropriations of Spinoza as a radical thinker, throughout enlightened Europe.³ Like the ‘frontier perspective’, Israel’s radical Enlightenment is meant to complement or perhaps even remedy the study of ‘national’ Enlightenments.

In what follows, I would like to look at two figures of this radical Enlightenment, of slightly unequal fame: the English deist Anthony Collins (1676–1729), a figure chiefly active in the first quarter of the eighteenth century, and the French materialist Denis Diderot (1713–1784), who is roughly of the next generation. From a frontier perspective, or a supra-national perspective like Israel’s, everything brings Collins and Diderot together, *ils ont tout pour s’entendre*, including their basic commitment to ‘Spinozism’ with an ‘s’, and specifically, what concerns me here, the Spinozist claim according to which ‘In the Mind there is no absolute, or free, will, but the Mind is determined to will this or that by a cause which is also determined by another, and this again by another, and so to infinity’, which can be supplemented with Spinoza’s statement that ‘men believe themselves free because they are conscious of their own actions, and ignorant of the causes by which they are determined [...] the decisions of the Mind are nothing but the appetites themselves, which therefore vary as the disposition of the Body varies’.⁴

Neither Collins nor Diderot are Laplacian determinists, unlike d’Holbach, or in a more restricted sense, Hobbes. They both recognise the specificity of the mind, mental events and processes, and the need for the determinist to attend to this specificity. In other words, a Spinozistic determinist emphasises a more specific kind of determination than a Laplacian determinist, who emphasises predictability, based on the laws governing the basic components of the universe and their interactions, and in that sense is purely a physicalist; the latter view, incidentally, is found prior to Laplace not only in d’Holbach, but also in Condorcet.⁵ My claim in this essay will be that Collins and Diderot put

3. Yves Citton’s *L’Envers de la liberté: L’invention d’un imaginaire spinoziste dans la France des Lumières* (Paris, 2006) is a fascinating attempt to take Israel’s model and reevaluate it in less historical terms, as an ‘invention of Spinozism’ in the Enlightenment.

4. Spinoza, *Ethics*, II, p. 48; III, p. 2d.

5. See P.-S. Laplace, *Essai philosophique sur les probabilités* (1814; Paris, 1921), p. 3. The text was revised up until 1825, but Laplace had already presented the ideas in a lecture at the École Normale in 1795, and even earlier, had read a paper to the Académie des Sciences in 1772 on calculus and the ‘système du monde’, containing the germ of the present passage. Condorcet’s 1768 *Lettre sur le système du monde* contains an extremely similar passage, as does d’Holbach’s *Système de la nature* (I.iv), which appeared in 1770.

forth two very different versions, or scenarios, of this Spinozist determinism – one more English, Lockean, and skeptical, the other more Continental and embodied; indeed, the latter amounts to an actual metaphysics, something that the English tended to treat with suspicion. Comparing these two authors on this topic should demonstrate that being a determinist, as part of the radical Enlightenment, meant something quite different than it meant even in the early nineteenth century – a shade of meaning we seem to have retained until the present day – and indeed, that it meant two rather different things on either side of the Channel.

Collins's reception in the French radical Enlightenment was chiefly mediated by Voltaire and d'Holbach. Voltaire declared, specifically as regards freedom and determinism, that

[...] *cette question sur la liberté de l'homme m'intéressa vivement; je lus les scolastiques, je fus comme eux dans les ténèbres; je lus Locke et j'aperçus des traits de lumière; je lus le traité de Collins, qui me parut Locke perfectionné; et je n'ai jamais rien lu depuis qui m'ait donné un nouveau degré de connaissance.*⁶

As to d'Holbach, he translated several of Collins's more polemical deistic works, on prophecy, the 'grounds of the Christian religion', and the contents of the journal *The Independent Whig*, in which Collins had published anonymously. However, the contrast I am interested in exploring is between Collins and Diderot.

Collins' volitional determinism

The work of Collins which concerns us here is his *Philosophical Inquiry Concerning Human Liberty*, published in 1717. Collins credits Locke, Bayle, Leibniz and Cicero as his chief influences, and also locates his work with respect to early eighteenth-century debates on the nature of evil – notably William King's *De origine mali*, later translated by the Lockean, Edmund Law. Not explicitly mentioned but clearly in the background are Hobbes, specifically, his debate with Bishop Bramhall on liberty and necessity, and Spinoza, whose *Opera posthuma* was in Collins's library, as well as Lucas' *La vie et l'esprit de*

A study of proto-Laplacian determinism in the later part of the eighteenth century in France remains to be written – but this would no longer be a 'frontier' perspective in any sense.

6. Voltaire, 'Le philosophe ignorant', § xiii, in *Œuvres complètes*, éd. L. Moland, vol. 26 (Paris, 1879), p. 55.

Spinoza. Collins also mentions Spinoza positively in his debate with Samuel Clarke, and the catalogue of his library indicates that he owned a great deal of clandestine literature: Vanini, Campanella, Cardano and Bruno, whose *Spaccio* he had translated for his private usage, even if Toland ended up publishing the translation.⁷

However, the key intellectual figure in his life was Locke, who himself felt, as he wrote to Collins in his last year, that ‘I know nobody that understands [my book] so well, nor can give me better light concerning it [...]’ Locke also wished that if he were ‘setting out in the world’ anew, he could have ‘a companion as you [...] to whom I might communicate what I thought true freely’.⁸ The extent to which Collins’ political and theological radicalisation of Locke would have been *desired* by Locke is an open, and interesting question, but cannot be addressed here. I merely want to make clear that Collins’ brand of determinism, like the rest of his philosophy, including his debate with Samuel Clarke on matter and thought, is heavily conditioned by Lockean concepts. It should thus not be seen as merely a renewal or repetition of Hobbesianism, as has been claimed in a recent, and prominent study of liberty and necessity in eighteenth-century British thought.⁹

Indeed, the closeness between Locke and Collins reaches fairly unexpected levels of pathos, with Locke declaring that ‘you are mistaken in me. I am not a yonge Lady a beauty and a fortune’. Collins, for his part, responded that:

I am not mistaken in you, for though you are not a Young Lady a Beauty and a fortune Yet I have more satisfaction and pleasure in your friendship than I can hope for from those qualifications only

7. See James O’Higgins, *Determinism and freewill: A. Collins’ A Philosophical Inquiry Concerning Human Liberty* (The Hague, 1976), p. 36–37. Collins, *An Answer to Mr Clarke’s Third Defence*, printed in vol. 3 of *The Works of Samuel Clarke*, 4 vols. (1738; reprint, New York, 1978); *A Complete Catalogue of the Library of Anthony Collins* (London, 1731). On Collins, Toland and Bruno see Margaret C. Jacob, *The Newtonians and the English Revolution* (Ithaca, 1976), p. 245; Israel, *Radical Enlightenment*, p. 615.

8. Locke to Collins, letters 3504 (April 3rd 1704) and 3361 (October 29th 1703), respectively, in Locke, *Correspondence*, ed. E.S. De Beer, vol. 8 (Oxford, 1976–1989), p. 263, 297.

9. James A. Harris, in *Of Liberty and Necessity: The Free Will Debate in Eighteenth-Century British Philosophy* (Oxford, 2005), p. 13, 55–58, describes Collins as a return to Hobbes, which was in fact the mainstream nineteenth-century view. I agree instead with Peter N. Miller, ‘Freethinking and “Freedom of Thought” in Eighteenth-Century Britain’, *Historical Journal* 36:3 (September 1993), for whom Locke was ‘the most profound influence on Collins’ (p. 609).

[...]. If I fall into the strain of a Lover, it is from motives that arise within me, and that are not in my power to prevent. You must cease to be what you are; nay you must never have been what you have been, to destroy that disposition of mind that has so much merit for its foundation. [...] You [...] who while in town are so Young, Lusty and Willing.

Locke wrote later:

I have long since surrendered myself to you. [...] I am your captive by the soft but stronger force of your irresistible obligations, and with the consent and joy of my own mind. Judge then whether I am willing my shadow should be in the possession of one with whom my heart is and to whom all that I am, had I any thing beside my heart worth the presenting, does belong. [...]

Finally, in a letter he wished to be delivered to Collins after his death, declaring 'I know you loved me living'.¹⁰ Such language demonstrates, at the very least, an unusual degree of intellectual intimacy between these two philosophers.

This closeness is also visible in their ideas on determinism. Locke, in the chapter of his *Essay Concerning Human Understanding* on 'Power' (book II, chapter xxi),¹¹ had put forth a very complex critique of the idea of free will. Its complexity is in good part due to Locke's inclusion in the chapter of each state of his evolving views on the topic, as he revised the *Essay*. Notably, beginning in the second edition, Locke abandoned his initial view that our will is determined by the greater good, and puts forth a new category, 'uneasiness':

[Uneasiness] is the great motive that works on the Mind to put it upon Action, which for shortness sake we will call determining of the Will (*Essay*, II.xxi, §29);

[W]hat [...] determines the Will in regard to our actions is not [...] the greater good in view: but some (and for the most part the most pressing) *uneasiness* a man is at present under (§31);

10. Locke to Collins, March 21st/24th 1704, letter 3498, p. 253, 255 (spelling unchanged); Collins to Locke, March 30th 1704, letter 3500, p. 258; Locke to Collins, August 16th 1704, letter 3613, p. 378; Locke to Collins, August 23rd 1704 (but delivered as Locke asked, after Locke's death, October 28th), letter 3648, p. 417 (all in *Correspondence*, vol. 8).

11. John Locke, *An Essay Concerning Human Understanding* [1690, 5th ed. 1701], ed. P. Nidditch (Oxford, 1975) (quoted directly by book, chapter and paragraph number).

[G]ood, the *greater good*, though apprehended and acknowledged to be so, does not determine the will, until our desire, raised proportionately to it, make us uneasy in the want of it (§35).

But Locke, perhaps afraid of the deterministic consequences of this kind of hedonism, in which my actions are almost entirely motivated (or determined) by my most pressing uneasiness, reintroduces a kind of unconditioned moment in this schema, which he calls the 'suspension of desire', a reflexive, second-order relation to the various pressing desires or uneasinesses:

For, the mind having in most cases, as is evident in experience, a power to *suspend* the execution and satisfaction of any of its desires; and so all, one after another; is at liberty to consider the objects of them, examine them on all sides, and weigh them with others. In this lies the liberty man has; [...] we have a power to suspend the prosecution of this or that desire; as every one daily may experiment in himself. This seems to me the source of all liberty; in this seems to consist that which is (as I think improperly) called *free-will*. For, during this *suspension* of any desire, before the *will* be determined to action, and the action (which follows that determination) done, we have opportunity to examine, view, and judge of the good or evil of what we are going to do; [...] (*Essay*, II.xxi, §47).

This is the hinge on which turns the *liberty* of intellectual beings, in their constant endeavours after, and a steady prosecution of true felicity,- That they can *suspend* this prosecution in particular cases, till they have looked before them, and informed themselves whether that particular thing which is then proposed or desired lie in the way to their main end, and make a real part of that which is their greatest good. [...] experience showing us, that in most cases, we are able to suspend the present satisfaction of any desire (§52).

This is what Collins is going to react to, in contrast to his otherwise quite Lockean outlook. He bluntly declares at the beginning of his *Inquiry*¹² (p. i-ii) that he will be 'denying liberty' in most senses of the word, adding later on

12. Collins, *A Philosophical Inquiry Concerning Human Liberty* (London, Robinson, 1717; reprinted in O'Higgins, *Determinism and freewill* and as a separate edition (New York, 1976), p. i-ii).

that ‘the common notion of liberty is *false*’ (p. 22) and ‘if a cause be not a necessary cause, it is no cause at all’ (p. 58). Given his ‘causal axiom’ – that all actions have a beginning, and everything that has a beginning has a cause, hence all actions are caused necessarily (p. 59) – he cannot accept the idea of suspension.

Collins asks if we are free to will or not will, and answers ‘No’: ‘we have not that liberty’ (p. 37). If an action which is in our power suggests itself to us, e.g., going for a walk, the will *to go or not to go* for a walk exists right away. The same is true if someone asks if I would like to go for a walk tomorrow: my will responds immediately (p. 38). I can either will that which is offered to me, not will it (but precisely, ‘I do not want to go for a walk’ does not mean ‘I have no will at all’ but rather ‘I will not go for a walk’ or more technically, ‘I will to not go for a walk’), or defer willing, which again means to ‘have a will to defer willing about the matter proposed’ (p. 38). As soon as someone asks if I wish to go for a walk, I have no choice but to will. Even when I reject all alternatives that are offered to me, my decision is still a volition.

This is Collins’s first explicit criticism of Locke. The moment of suspension of the execution of our desire is a ‘moment of freedom’ which Collins rejects.¹³ He explains that Locke’s mistake is a verbal one, concerning the future tense: if I choose to put off my decision to go for a walk – Collins magnifies the example here, so that it becomes ‘going to France or Holland’ (*Inquiry*, p. 39, 52) – it does not mean that my willing has actually been suspended, since my will has exercised its power in any case. As he puts it, ‘*suspending to will* is itself an *act of willing*’, it is, as he repeats, ‘willing to defer willing about the matter propos’d’ (p. 39, author’s emphasis).¹⁴ Recall that Locke’s doctrine of suspension appeared to reintroduce an uncaused, ‘libertarian’ component into an otherwise coherent determinism of ‘uneasiness’. Indeed, Locke was always quite explicit about suspension being voluntary; he spoke of ‘hold[ing] our wills undetermined’ (*Essay*, II.xxi.52) until we have examined the possible courses of action, a formulation which

13. Indeed, it may well be that this is from Malebranche. See Gideon Yaffe, ‘Locke on Suspending, Refraining and the Freedom to Will’, *History of Philosophy Quarterly* 18:4 (2001), p. 387, n. 2. Concretely, Malebranche had declared that ‘the power of suspending judgment [...] is the principle of our liberty’ (*Traité de la nature et de la grâce*, III, i, 13, in *Œuvres*, éd. G. Rodis-Lewis, vol. 2 [Paris, 1992], p. 117).

14. This is also Leibniz’s objection to Locke’s notion of suspension, in the *New Essays on Human Understanding*, ed. & trans. P. Remnant & J. Bennett (Cambridge, 1982), II.xxi.47.

is open to Collins' critique. The problem does not lie in the chain of events that gives rise to suspension, but in the purportedly undetermined nature of the state of suspension once we are in it.

Collins takes over much of Locke's critique of free will but he rejects the introduction of 'suspension'. We are never fully free because we are always willing: this is a *psychologically sophisticated determinism*, or, to put it differently, a determinism which *recognises the specific nature of volitions*: it is a *volitional determinism*.¹⁵ Indeed, Collins, for all his neat Spinozistic causal closure, nevertheless maintains a form of compatibilism, more specifically, a position closely resembling what used to be called the 'Hume-Mill thesis', according to which 'an act [is] free insofar as the agent's motives or drives are a link in its causal chain', and 'these motives or drives may themselves be as rigidly determined as you please'.¹⁶ It is rarely, if ever noted that Collins formulates this position before Hume; his own term for it is 'moral necessity':

I contend only for what is called *moral necessity*, meaning thereby, that man, who is an intelligent and sensible being, is determined by his reason and his senses; and I deny man to be subject to such necessity, as is in clocks, watches and other beings which for want of sensation and intelligence are subject to an *absolute, physical or mechanical necessity* (Collins, *Inquiry*, p. iii; emphasis mine).

Later, after a long critique of freedom as indifference, Collins says that even in such an apparently indifferent situation such as choosing between two eggs,

[...] all the various modifications of the man, his opinions, prejudices, temper, habit and circumstances are to be taken in and considered as causes of election no less than the objects without us among which we choose (p. 47).

15. I borrow this term from Vere Chappell, 'Locke on the Freedom of the Will', in Chappell (ed.), *Locke* (Oxford, 1998), p. 86, but use it in a different sense. He uses it like the older term 'psychological determinism', to refer to Locke's doctrine of action as determined by the will; I extend the term to mean a type of determinism which allows for, indeed *focuses on*, volitions and other mental acts, in contrast to a 'physicalist' determinism which denies the existence of this level of action, or at least seeks to reduce it to a lower-level explanation.

16. W. V. O. Quine, 'Things and their place in theories', in P. K. Moser & J. D. Trout (eds), *Contemporary Materialism* (London, 1995), p. 199 (he attributes this view to Spinoza and Hume).

Thus 'it is contrary to experience to suppose any choice can be made under an equality of circumstances' (p. 52). But what is determining our choice is not particularly the beating of the wings of a butterfly in China, but these specifically 'moral' (affective, volitional) causes. Collins' insistence on distinguishing two kinds of necessity is a skilful maneuver faced with opponents such as Samuel Clarke, who from his Boyle Lectures onwards had asserted 'moral necessity' for the opposite reason, precisely to defend the moral realm against any encroachment of physicalistic reductionism:

The necessity by which the power of acting follows the judgment of the understanding is only a moral necessity, that is, *no necessity at all* in the sense wherein the opposers of liberty understand liberty. For moral necessity is evidently consistent with the most perfect natural liberty.¹⁷

In contrast, Collins presents liberty and necessity as 'consistent' in the *Inquiry*. Clarke will of course be quite unhappy with this revised version of the concept of moral necessity, which he views as collapsing our determination by our desires, emotions and beliefs into mere 'motions of a clock', as he says in his first Boyle Lecture (*A Demonstration of the Being and Attributes of God*, p. 64). He returns to this opposition between the 'free' human power of self-motion and this blind mechanical necessity in his controversy with Collins on matter and thought, known as the *Letter to Dodwell* – stating that if thinking were a mode of matter, every thinking being, including God, would be governed by 'absolute necessity, such as the motion of a clock or a watch is determined by'¹⁸ – and later, in correspondence with Leibniz. Curiously, when Clarke responds to Collins' usage of the clock metaphor in his 1717 remarks on the *Inquiry*, he appears to grant that the only difference between a human being and a clock is that the former has sensation and intelligence (whereas the latter does not), but then adds that sensation and intelligence *are not the power of action*. That is, it is not the having of sensation or intelligence which makes the difference, since 'the pulsation of the heart, though joined with sensation, is yet as necessary a motion as that of

17. Samuel Clarke, *A Demonstration of the Being and Attributes of God* (First Boyle Lecture, 1705), § x, in *A Demonstration of the Being and Attributes of God and Other Writings*, ed. E. Vailati (Cambridge, 1998), p. 73 (emphasis mine); for Collins' retort, see *Inquiry concerning Human Liberty*, p. 112.

18. Clarke, *A Third Defense of an Argument made use of in A letter to Mr. Dodwell*, in *The Works of Samuel Clarke*, vol. 3, p. 851.

a clock', such that the pulsations of the heart 'are no more an action of the man, than the other is of the clock'.¹⁹

From our standpoint, which focuses on Collins, the point is that the only difference between a human being and a clock is that the former has sensation and intelligence, which are the grounds for it being governed by a specifically 'moral' necessity. Both the cogs of a clock in relation to the clock as a whole, and my desires, attitudes, or beliefs in relation to my 'acting' as a whole, are causally linked. There is no *less* causality in the latter case than in the former. However, Collins sidesteps the issue of reductionism, whether ontological or explanatory, because he deliberately remains at the strictly psychological level, never inquiring into how it is that a deterministically driven agent in a causal world might also be a *natural* agent.

This is precisely what Diderot will want to address, declaring, 'What a difference there is, between a sensing, living watch and a golden, iron, silver or copper watch!'²⁰ La Mettrie had famously stated in the opening paragraphs of *L'Homme-Machine* that the question, 'can matter think?' is tantamount to asking 'can matter tell time?', and he later seeks to exploit, for materialist purposes, the celebrated clock metaphor which appears in countless texts of the period.²¹ What is both interesting and confusing about this metaphor, actually an analogy, is that it can be understood as a *mechanistic* analogy or as a strictly *functional* analogy (thought is a functional property of organized beings, like telling time is for clocks), as has been clearly pointed out by Timo Kaitaro.²² In contrast, if we think back to the debate between Collins and

19. Clarke, 'Remarks on a book, entitled, *A Philosophical Inquiry into Human Liberty*', in *The Works of Samuel Clarke*, vol. 4, p. 722; Clarke, *Demonstration of the Being and Attributes of God and Other Writings*, p. 133. In response to one of the letters from 'an Anonymous Gentleman of Cambridge', Clarke adds that Collins' distinction between moral and physical necessity, with the example of a scale, is misleading, because in the end Collins' 'moral necessity' has us be just as determined as a scale is by its weights.

20. *Éléments de physiologie*, in Diderot, *Œuvres complètes*, éd. H. Dieckmann, J. Proust & J. Varloot (Paris, 1975–), vol. 17, p. 335; Diderot, *Œuvres*, éd. L. Versini, vol. 1: *Philosophie* (Paris, 1994), p. 1283.

21. La Mettrie, *Œuvres philosophiques*, éd. F. Markovits (Paris, 1987), vol. 1, p. 63; Descartes, *Principes*, IV, §203, in *Œuvres*, éd. Adam-Tannery (Paris, 1964–1974), vol. 11, p. 321–322; *Description du corps humain*, vol. 11, p. 226; *Discours de la méthode*, § V, vol. 6, p. 57, 59, and Samuel Formey, *Recherches sur les éléments de la matière* (1747), § XLV, LV, in *Mélanges philosophiques* (Leyden, Élie Luzac, 1754).

22. Kaitaro, "Man is an admirable machine" – a dangerous idea', in M. Saad (dir.), *Mécanisme et vitalisme: La lettre de la Maison française d'Oxford*, vol. 14 (special issue,

Clarke as to the difference between the motions of a clock, and the pulsations of the heart, Diderot's point is that a robust determinism must in fact take account of the specificities of organic or 'organised' beings – while remaining a determinism.

Diderot's embodied determinism

Diderot, like Fontenelle – in the latter's clandestine *Traité de la liberté de l'âme*, written in 1700 but only published, anonymously, in 1743 – but on a more empirical plane, considers that mental faculties such as memory and the will are processes which turn out to be *cerebral* processes: 'Man's key characteristics lie in his brain, not in his external constitution', so that, e.g. 'in order to explain the mechanism of memory we have to examine the soft substance of the brain'.²³ He also denies that there is any fundamental difference between reasoning or internal contemplation, and sensation: '[T]here is only one operation in man: sensing, and this operation is never free'.²⁴ This can be seen as a continuation of the Lockean emphasis on hedonism *qua* determinism, precisely as in Collins, but being a materialist he is not content to leave the story there. In *Le Rêve de D'Alembert*, he will provide hints, *esquisses* of a biological or perhaps biologicistic theory of self, in which selfhood is derived from the functioning of the central nervous system, and the will is longer a faculty with a capital F but rather a part of the cognitive functions of an animal as a whole. Thus 'there can be no rational goodness or wickedness, although there can be an animal goodness or wickedness [...]'.²⁵

Briefly put, Diderot is initially a hard determinist, declaring 'there is only one kind of causes [...]: physical causes', 'the physical world and the moral world are one and the same', or, lastly, 'the moral world is so intimately tied to the physical world that it appears both are really one and the same ma-

2001), p. 117 and more broadly, Sidney Shoemaker, 'Some varieties of functionalism', in *Identity, Cause and Mind* (Cambridge, 1984), p. 266.

23. *Éléments de physiologie*, in Diderot, *Ceuvres complètes*, vol. 17, p. 326, 470.

24. Franz Hemsterhuis / Denis Diderot, *Lettre sur l'homme et ses rapports, avec le commentaire inédit de Diderot*, éd. G. May (New Haven & Paris, 1964), p. 155 [59a]; Diderot, *Ceuvres*, ed. Versini, vol. I, p. 717.

25. Diderot, s.v. 'DROIT NATUREL (*Morale*)', in Diderot & D'Alembert (dir.), *Encyclopédie raisonnée des sciences, des arts et des métiers* (reprint, Stuttgart & Bad Cannstatt, 1966), vol. 5, 115b. Notice that he is not denying the existence of goodness or wickedness (a view which he attributes to La Mettrie).

chine'.²⁶ Yet later, when critiquing Helvétius, he grows dissatisfied with the lack of specificity of such explanations, and declares that 'I am a man, and I require causes proper to man'.²⁷ It is comments like these which lead me to stress that Diderot is not what I have termed a Laplacean determinist: yes, the universe is a causally closed whole, but within that whole Diderot wants specific explanatory and indeed ontological strata ('causes proper to man'). The idea that in a causally closed universe, there might be causes 'proper to man' may sound a bit like moral necessity, as distinguished from the necessity of the motions of a clock; but the novelties are that:

(a) This is linked up with the concept of *organisation* and the notion of organic *continuity* rather than mere *contiguity*, on which it is premised.²⁸ Very summarily, one could say that the term *organisation* was used in the same way as the term 'organism', which only became current in French (or German) by the 1800's, even though Leibniz had introduced it into French in the early 1700's. It referred to our bodily constitution inasmuch as it displayed features which were not present in machines, such as self-regulation, or the 'sympathy' between the organs which the Montpellier vitalists insisted on so emphatically. However, the concept of 'organisation' is compatible with mechanistic, reductive explanations in a way that the concept of 'organism', especially in its Kantian and Romantic reinterpretations, is not.

The difference between the life of an organic being and the life of a wooden automaton, or a watch, is not that the former possesses a soul, or is free, whereas the latter is not. The difference is, one might say, a *structural* one, between two different types of arrangements of parts. But notice that my *organisation* is not a substructure on which I supervene as a person or an individual; it *is* my individuality.

(b) Inasmuch as I am an organic being, I am modifiable or corrigible, like the dog which recognises the stick with which its master had beaten it,²⁹ but I

26. Letter to Landois, in Diderot, *Œuvres complètes*, vol. 9, p. 258; *Paradoxe sur le comédien*, in *Œuvres complètes*, vol. 20, p. 53; 'Dieu et l'homme' (an unpublished review of a 1771 book of that title by Pierre-Louis Sissous de Valmire, intended for Grimm's *Correspondance littéraire*), in *Œuvres complètes*, vol. 20, p. 655.

27. Diderot, *Œuvres*, éd. Versini, vol. 1, p. 796.

28. See Karl M. Figlio, 'The metaphor of organisation: an historiographical perspective on the bio-medical sciences of the early 19th century', *History of Science* 14 (1976).

29. Respectively, (i) Diderot, s.v. 'MODIFICATION', *Encyclopédie*, vol. 10, p. 602a / Diderot, *Œuvres*, éd. Versini, vol. 1, p. 479 (a more elaborate version is at p. 665); (ii) *Jacques le fataliste*, in Diderot, *Œuvres complètes*, vol. 23, p. 190 (Leibniz had remarked that when the master raises a stick, the dog fears a blow [*New Essays*, II.xi.11]; see also Hume, *A*

am also a *unity*, a unified whole: ‘Regardless of the multitude of causes which concurred to make me what I am, I am a single cause [*une cause une*]’³⁰.

(c) All of this is connected to Diderot’s brief but dense article in the *Encyclopédie* entitled ‘SPINOSISTES’, in which ‘modern Spinosists’ are distinguished from ‘ancient Spinosists’ because the former specifically assert a metaphysics of living matter, tied to the new theory of biological epigenesis:

*SPINOSISTE, s. m. (Gram.) sectateur de la philosophie de Spinoza. Il ne faut pas confondre les Spinosistes anciens avec les Spinosistes modernes. Le principe général de ceux-ci, c’est que la matière est sensible, ce qu’ils démontrent par le développement de l’œuf, corps inerte, qui par le seul instrument de la chaleur graduée passe à l’état d’être sentant & vivant, & par l’accroissement de tout animal qui dans son principe n’est qu’un point, & qui par l’assimilation nutritive des plantes, en un mot, de toutes les substances qui servent à la nutrition, devient un grand corps sentant & vivant dans un grand espace. De-là ils concluent qu’il n’y a que de la matière, & qu’elle suffit pour tout expliquer ; du reste ils suivent l’ancien spinosisme dans toutes ses conséquences.*³¹

Modern ‘Spinosists’, in other words, are materialists for whom the biological is the reducing theory; faced with metaphysical dualism, with the concept of soul, or self, or personal identity, they respond by subjecting such phenomena to the conceptual ‘filter’ of the emerging biological sciences. What it is to be me is to have my unique *organisation*; it is governed by biological laws – although Diderot, a stalwart Lucretian, is more interested in how natural forms suddenly arise and then are ‘exterminated’, than in stability or law-like behavior.

So the one key difference between Collins’ determinism and Diderot’s is the specifically ‘embodied’ flavour of the latter; but in addition, Diderot also re-

Treatise of Human Nature, ed. D. F. Norton [Oxford, 2000], 1.iii.16); (iii) Hemsterhuis / Diderot, *Lettre sur l’homme*, p. 285 [124a] / Diderot, *Œuvres*, éd. Versini, vol. 1, p. 737.

30. Hemsterhuis / Diderot, *Lettre sur l’homme*, p. 157 [60a] ; Diderot, *Œuvres*, éd. Versini, vol. 1, p. 718. Jacques Chouillet’s essay ‘Des causes propres à l’homme’, in *Approches des Lumières: Mélanges offerts à Jean Fabre* (Paris, 1974) remains the best commentary on Diderot’s changing understanding of causes and determinism.

31. Diderot, s.v. ‘SPINOSISTES’, in Diderot & D’Alembert (dir.), *Encyclopédie*, vol. xv, p. 474a. See the penetrating analysis by Alexandre Métraux, ‘Über Denis Diderots Physiologisch Interpretierten Spinoza’, *Studia Spinozana* 10 (1994).

turns to a more basic Spinozist claim (now spelled with a 'z'), namely, that we are parts of one vast interlocking system of bodies and their transformations, and nothing else besides; this is what he calls '*le Tout*', with statements such as this one, from the *Rêve de D'Alembert*: '*tout change, tout passe [...] il n'y a que le tout qui reste*'. Hence (from the *Éléments de physiologie*) 'A volition without a cause is a chimera. Nothing occurs in Nature through leaps; everything therein is connected'.³² Diderot did not see a contradiction in between being a determinist – if, admittedly, of an 'expanded' sort – and denying that the world reduces to predictable, mechanical laws, because of his vision of living matter in perpetual transformation. Thus what is so paradoxical about his turning 'Spinozism' into a metaphysics of living matter: neither a determinist in general, nor a Spinozist in particular, can really accept the existence of a qualitative discontinuity between living matter and dead matter, or, which amounts to the same thing, the attribution of animate properties to *all of matter*.

Conclusion

Collins' volitional determinism radicalises Locke by extending his notion of 'uneasiness' while rejecting 'suspension'. He thereby imposes a notion of causal closure, while at the same time restricting himself to the domain of the mind. Not only does he not make any pronouncements on the ultimate nature of reality, or the physical universe. Collins also avoids making any explicit reductionist claims about the physical basis of mental activity, including volition, which should remind us of Locke's declaration at the beginning of the *Essay*, that 'I shall not at present meddle with the Physical consideration of the Mind'.³³ Skeptical and nominalistic strains here precisely do not entail a metaphysically realist claim about the place of our minds in a (natural) causal world. In contrast, Diderot, in this respect following a literally more 'sanguine' strain of realism in the French clandestine tradition of Fontenelle, Fréret, and La Mettrie, among others, asserts that we are agents inasmuch as we are complex organisms conditioned by and interacting with a host of other bodies, in a natural causal world.

Admittedly, one can produce counter-examples to this distinction between an English 'skeptically motivated' determinism and a French 'metaphysically

32. Respectively, Diderot, *Œuvres*, éd. Versini, vol. 1, p. 631, and *Œuvres complètes*, vol. 17, p. 483.

33. Locke, *Essay*, 1.1.2.

motivated' determinism: in the earlier generation, both Hobbes and Spinoza share a strong commitment to causality, and in contrast, the clandestine tradition tends to emphasise *a posteriori* claims for the rule of necessity, based on experience. But if we examine the *Wirkungsgeschichte* of Collins and Diderot, a certain kind of pattern, if not a teleology, appears: Collins's specifically *volitional* determinism leads to Priestley, Mill, and associationist psychology. Hume, too, belongs in this trajectory, except that some of the ideas we associate with him can actually be traced back to Collins, notably moral necessity. Diderot's *embodied* determinism, in contrast, leads to the biological theorising of Cabanis, Bichat, and Bernard.

Now, neither Collins nor Diderot reduce all necessity to physical necessity: Collins insists on the concept of moral necessity, and Diderot is equally committed to finding 'causes proper to man'. To use the distinction I formulated earlier, both are Spinozist determinists rather than Laplacean determinists. But – in a return to a 'pre-Israel' analysis of what the Enlightenment is – the English variant of Spinozistic determinism restricts itself to the realm of the mind and its 'furniture', whereas the French variant locates all of this within a biologically driven, and directed, realist metaphysics of living matter – a metaphysics which is more Leibnizian than Lockean; more Continental, once again. It would appear as if there were quasi-national boundaries between types of determinism in the radical Enlightenment, after all.