

**The Leibnizian Organism Between Cudworth's Plastic Natures
and Locke's Thinking Matter**

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What I would like to do today is to go some way towards providing a broader picture of the background to the *Nouveaux essais* by looking at some of Leibniz concerns contemporary to this work's composition.

One of the nice things about presenting relatively late at a conference is that one is able to draw on the papers that precede one's own and, if necessary, at the eleventh hour seek to change one's paper so as to resolve interpretative questions that came up in earlier papers. In particular, while I kept silent yesterday what I'd like to try to do is to provide an answer to the mild controversy that flared up yesterday involving Dan, Francois, and Glenn, --and I can't remember who was on which side—as to whether the soul needs to be adduced in order to account for the animal, or whether the animal can be accounted for exhaustively in mechanistic terms.

A good portion of Leibniz's mature metaphysics can be arrived at by taking at least half-seriously two conclusions rabidly denounced by his Cambridge contemporaries, Henry More and Ralph Cudworth. More famously denies the existence of a world soul, arguing in *On the Immortality of the Soul*, for example, that, if there were such a thing, a man could not «lash a Dog, or spur a Horse, but himself would feel the smart of it: which is flatly against all experience, and therefore palpably false. »¹ Cudworth, for his part, in his 1678 work on the *True Intellectual System of the Universe*, in complete ignorance, naturally, of what would still take decades to emerge as Leibniz's mature doctrine of monads, writes :

¹More, *The Immortality of the Soul*, ch. XVI: 3.

If matter, as such, had life, perception, and understanding belonging to it, then of necessity must every atom, or smallest particle thereof, be a distinct percipient by itself; from whence it would follow that there could not possibly be any such men as now are, compounded out of them, but every man and animal would be a heap of innumerable percipients and have innumerable perceptions and intellections... And to say that these innumerable particles of matter do all confederate together; that is, to make every man and animal to be a multitude or commonwealth of percipients, and persons, as it were, clubbing together, is a thing so absurd and ridiculous, that one would wonder the hylozoists should not rather choose to recant that their fundamental error of the life of matter, than endeavour to seek shelter and sanctuary for the same, under such a pretence.²

Curiously, Leibniz does accept the absurd conclusion that a man does feel the same smart as the dog, if much more faintly ; but Leibniz does not, for all that, accept this as a result of any commitment to the existence of a world soul. Leibniz also accepts the absurd conclusion that every portion of every body consists in ‘innumerable percipients with innumerable perceptions and intellections’, but not as a result of any commitment to the belief that, as Cudworth puts it, matter *as such* has perception attached to it. In order to understand Leibniz’s acceptance of these two doctrines, and his simultaneous rejection of the positions that More and Cudworth see as giving rise to them, we must pay close attention to the polemical exchange he engaged in with Ralph Cudworth, an exchange whose results were already well in place by the time Leibniz responded to Locke’s philosophy in the *Nouveaux essais*. Out of this exchange, Leibniz emerges with a view he forcefully repeats in the preface to this response to Locke according to which :

1. **Organism** : Everything that happens in nature can be explained without introducing immaterial principles of activity by appealing to the organic structure of all matter, a structure wherein every thing is mechanical, and

²Cudworth, *True Intellectual System of the Universe*, 406.

everything remains mechanical at any arbitrarily chosen level of analysis, i.e., there is order or organic structure 'all the way down' ;

2. **Conspiracy** : While mental activity is not required in order to explain anything that happens in nature, still metaphysically speaking the organicity of everything in nature depends on the universe being constituted out of infinitely many embodied, perceiving creatures, each of which perceives every other, even if for the most part only very confusedly.

What I would like to do in this paper is to show how these two important features of Leibniz's response to his Cambridge contemporaries can help to shine some new light on Leibniz's well-trawled disagreement with Locke over the possibility of thinking matter. In the process, I would like to go some distance towards revealing the centrality in this period of Leibniz's thought of a concept that in my view has yet to be given adequate attention, namely, that of organism.

As Francois Duchesneau has correctly observed, « in Leibniz, the concept of organism appears to arise in the first years of the 18th century and to have been worked out in correlation with the debate concerning plastic natures. »³ Leibniz himself writes :

Pour ce qui est de la nature plastique, je l'admets en general, et je crois avec M. Cudworth, que les animaux n'ont pas esté formés mecaniquement par quelque chose de non organique, comme Democrite et M. Descartes l'ont crù... [L]a matiere est plastique ou organique partout, même dans les portions aussi petites qu'on en puisse supposer.⁴

³Duchesneau, *Les modèles du vivant de Descartes à Leibniz*, 336. "Chez Leibniz, le concept d'*organisme* semble surgir dans les premières années du XVIIIe siècle et se préciser en corrélation avec le débat sur les natures plastiques."

⁴G III 368.

As we will see, though, this agreement can only be sustained so long as Leibniz and Cudworth be permitted to use the concept of plasticity each in his own and very singular way.

Let us start with the doctrine of *petites perceptions*, according to which every substance is always perceiving every state of the universe, however dimly and confusedly. This theory is in marked contrast to the Cartesian view, according to which there is no perception but apperception, nothing mindlike that is not in fact a thinking mind. Leibniz sees his introduction of *petites perceptions* as revolutionary, indeed, he says in the *Nouveaux essais*, these will be as important for the science of ‘pneumatics’ as subvisible corpuscles have already proven to be in physics. Elsewhere, Leibniz identifies the doctrine of *petites perceptions* as the equivalent in the study of mental phenomena as the physical hypothesis that matter is never at rest. Both are indispensable, and both serve as each other’s counterpart in two separate domains of description. As Pauline Phemister has rightly noted in her paper, this pair, minute perceptions and insensible particles, are for the Leibniz of the *Nouveaux essais* of central importance for explanations in the domains of physics, psychology, and even moral philosophy : without insensible perceptions, it would be impossible to feel pain and pleasure, and ultimately even to experience ourselves as world-bound.

In the *Nouveaux essais*, again as elsewhere, Leibniz invokes the Hippocratic motto « συμπνοια παντα », « all things conspire, » identifying the truth of this principle as a consequence of the doctrine of *petites perceptions*. This is not a causal conspiracy, as it evidently was in Hippocratic medical models, but rather a conspiracy to represent the same world in the same way, differing only with respect to point-of-view, not with respect to the content of the representations. Thus « dans la moindre des substances, des yeux aussi perçants que ceux de Dieu pourraient lire toute la suite des choses de l’univers. » (42).

It is from this doctrine of *petites perceptions* that Leibniz believes that we arrive at the notion of conspiracy. The nested individual substances constituting a corporeal substance

mutually perceive one another as co-conspirators in the sustenance of one and the same life. A corporeal substance, then, is an infinite collection of mutually perceiving substances that, in their mutual perception constitute something of a unity, even if this unity is not as rigorous as that attributed to the absolutely simple monad in texts such as the *Monadology*.

Significantly, this conspiracy is all that Leibniz, at least in the stage of his career that includes the *Nouveaux essais*, thinks is required to account for the only sort of union available for souls and bodies, namely, union by way of preestablished harmony. « C'est aussi par les perceptions insensibles que j'explique cette admirable harmonie préétablie de l'âme et du corps » (42). This doctrine of preestablished harmony, or, following Sleigh, concomitance between the soul and the organic body of a corporeal substance may be seen as a consequence of Leibniz's effort to account for organisms in terms that qualify, at least in Leibniz's usage, as mechanical. It was crucial for Leibniz that a mechanical explanation be given for all natural phenomena, one that would make no appeal to the spiritual concomitant in the corporeal substance, but only to the infinitely parted organic machine constituting the corporeal substance's body.

Leibniz has Théophile sum up all of the foregoing nicely in Book III, Chapter VI of the *Nouveaux essais*. Animated bodies, he says, can be picked out by their interior structures. Body and soul can each be taken separately, and each suffices for the determination of the identity of the thing in question. Neither influences the other, but each expresses the other perfectly, the one being the concentration in a unity of what the other disperses throughout a multitude (248).

It is, I suggest, the body, *pris à part*, as Leibniz puts it here, that is the organism. That is to say, that for Leibniz in this period, organism is just the machine of nature, that which remains mechanical in its least parts, and which does not require the introduction of the capacity for perception that would be required in the exhaustive account of a corporeal substance. In other words, 'organism' is for Leibniz a microphysical concept, not a metaphysical one, intended as an account of the difference between animate entities and

inanimate quasi-entities without recourse to the immaterial principles rejected by mechanism, even if some sort of immaterial principles may properly be introduced in the ultimate reckoning of things.

In texts extending from 1702 (*Animadversiones*) to 1714 (*Principes de la nature et de la grace*), Leibniz explicitly identifies the *corpus organicum* with the *machina naturae*, sometimes explicitly saying that to be organic is nothing other than to function as an infinitely complex automaton. It is thus surprising to see some commentators saying that in Leibniz's later work the concept of organism falls gradually out of sight. Rutherford, for example, writes that by the time of the *Système nouveau* of 1695, «organism has already been downgraded to an ontologically basic status. » Again, organism does not appear in Leibniz until 1704, while the term « corpus organicum » makes its first appearance in 1702. In 1695, then, the proposition that organism is less than ontologically basic is something Leibniz would neither affirm nor deny. Rutherford appears to be taking 'organism' as a synonym for 'corporeal substance'. I would like to leave aside the question whether, *mutatis mutandis*, Rutherford's claim about Leibniz's later philosophy is correct, and focus only on what this presumed synonymy overlooks. From the early years of the 18th-century, Leibniz uses the term 'organism' to describe the body of the corporeal substance, not the corporeal substance itself. The body is infinitely divisible, indeed divided, while the corporeal substance is a unity of sorts, that is not so much divisible as it is, to use Sleight's fancy term, component-wise deconstructible. Whereas earlier Leibniz would have written of the bodily component belonging to a corporeal substance, in the 18th century he turns to talk of the organism or *corpus organicum* that belongs to an animal.⁵ 'Animal' is a fine candidate for the role of the late-Leibnizian synonym for 'corporeal substance' ; 'organism' or 'organic body', or, again, 'the machine of nature,' is something different. And this is why I think I can join Glenn's army and affirm that animals are not aggregates, but the late-Leibniz descendents

⁵ A revealing passage from the *Animadversiones* runs as follows : A corporeal substance « unum per se est, non nudum aggregatum plurium substantiarum, multum enim interest verbi gratia inter animal et gregem. Adeoque haec Entelechia vel anima est, vewl quiddam Animae analogum, et semper corpus aliquod organicum naturaliter actuat, quod

of what were once corporeal substances, and that these remain important throughout the most mature writings.

Leibniz writes in the *Nouveaux essais* that in animate bodies « the soul and the machine, each on its own, suffice » (248) to pick out or the entity in question, the soul in terms of mutual perception of the infinitely many conspiring souls or soul-like substances, the machine in terms of its infinitely complex mechanical structure. It is precisely on this question as to how soon immaterial principles must be introduced to adequately account for the phenomena of living nature that Leibniz distinguishes himself most sharply from Ralph Cudworth. In his humbly titled *True Intellectual System of the Universe*, Cudworth understands either of two quite different things by the notion of plastic nature. One is something more or less the same as the notion of Archeus that Leibniz attributes to More, i.e., a singular plastic or animating faculty belonging to a world-soul, which, as Leibniz would describe it, “animates... bodies wherever it meets them, just as the wind produces music in organ pipes.”⁶ In this first sense, for Cudworth the plastic nature of the world is nothing other than an "Inferior and Subordinate Instrument" of God, which « doth Drudgingly Execute that Part of his Providence, which consists in the Regular and Orderly Motion of Matter. » This universal plastic nature is what keeps all of the dead or inorganic world moving in accordance with natural laws.

The other conception in Cudworth is of particular plastic natures belonging to particular creatures, to those entities in the universe commonly thought to be living. On this second conception, somewhat more akin to Leibniz's understanding of the entelechy of an animal, particular living beings in nature possess their own plastic natures, which serve as the "Inward Principles" of their growth and motion.⁷

ipsum separatim sumtum, deposita scilicet seu semota anima, non una substantia est, sed plurium aggregatum, verbo machina naturae.

⁶ Dutens II 225.

⁷Cudworth, *True Intellectual System of the Universe*, 150. On the connection of Cudworth's pananimism to Plotinus, see Alain Petit, "Ralph Cudworth: un platonisme paradoxal. La nature dans la *Digression Concerning the Plastick Life of Nature*."

Cudworth sees his dual notion of plastic nature as rooted in the Platonic tradition. "The Platonists seem to affirm both these together," he writes, "namely that there is a *Plastick Nature* lodged in all particular Souls of Animals, Brutes, and Men, and also that there is a *Plastick or Spermatick Principle* of the whole *Universe* distinct from the Higher Mundane Soul, though subordinate to it."⁸ Duchesneau explains that the individual plastic natures would ultimately win out over the universal plastic nature, and that "the followers of More and of Cudworth... passed from the singular of the *plastic nature* to the plural of the *plastic natures*."⁹ This latter version of plastic nature, as Duchesneau notes, makes room for a system of nature that focuses on the phenomenal characteristics of living beings. And it is in response to this notion of plastic nature that Leibniz's own mature conception of the organic bodies of corporeal substances is developed.

Cudworth's theory of plastic natures is offered as an alternative to the interpretation of all of nature as either governed by blind chance, or, on his understanding of the Malebranchean view, as micro-managed by God. Cudworth explains that, if plastic natures are denied,

it seems that one or other of these two things must be concluded: that either in the efformation and organization of the bodies of Animals, as well as the other phenomena, everything comes to pass fortuitously and happens to be as it is, without the guidance and direction of any mind or understanding; or else, that God himself doth all immediately, and, as it were with his own hands, form the body of every Gnat and Fly, Insect and Mite, as of other Animals in generations.¹⁰

⁸Cudworth, *True Intellectual System of the Universe*, 165.

⁹Duchesneau, *Les modèles du vivant de Descartes à Leibniz*, 181. "[L]es émules de More et de Cudworth seront alors passés du singulier de la *nature plastique* au pluriel des *natures plastiques*."

¹⁰ Cudworth, *True Intellectual System of the Universe*, Chapter III, Section xxxvii, 2.

Cudworth understands occasionalism, the theory according to which "every thing in Nature should be done immediately by God itself," to be no less atheistic than the other alternative, that of chance, in so far as "it would render Divine Providence Operose, Sollicitous and Distractious, and thereby make the belief of it to be entertained with greater difficulty."¹¹

It is in correspondence with Damaris Masham —Cudworth's daughter— that Leibniz first introduces the term "organism" in May, 1704. Writing to Masham concerning the plastic natures of her father, which we shall get to shortly, Leibniz describes the notion of plasticity in relation to his own notion of organicity. Leibniz insists, in response to Cudworth's appeal to immaterial plastic natures in the explanation of natural phenomena, that there is nothing over and above the mechanism of the corporeal substance's body — which is to say the corporeal substance's organism— required in the course of such explanation. Leibniz believes that the possibility of mechanistic explanation requires that there be infinitely many particular embodied animated beings, occupying each part of the universe.

This pananimism may best be conceived as a carving up of a world soul or universal spirit into infinitely many individual souls, each with its own function. Cudworth performs a similar division. Leibniz himself would not approve of either occasionalism or chance, and thus would hold that Cudworth must be mistaken in his claim that these are the only alternatives to the theory of plastic natures. Leibniz sees the appeal to particular immaterial principles in the explanation of natural phenomena as no more satisfying than the occasionalist theory or the doctrine of a world soul. As he explains in the *Animadversiones* of 1692:

¹¹ Cudworth, *True Intellectual System of the Universe*. Cited in Petit, "Ralph Cudworth: Un platonisme paradoxal. La nature dans la *Digression Concerning the Plastick Life of Nature*," 103.

[T]am frustra perceptiones et appetitus archaei, et ideae operatrices, et formae substantiarum, ipsaeque animae tunc adhibentur, quam frustra causam universalem omnium Deum ex machina ad res naturales singulas simplici voluntate ejus expediendas advocaremus.¹²

[I]t is as vain [in the explanation of natural phenomena] to introduce the perceptions and appetites of an archeus, operative ideas, substantial forms, and even minds, as it is to call upon a universal cause of all things, a *Deus ex machina*, to move individual natural things by his simple will."

According to Leibniz, the incorporeal component of a composite substance does not need to be invoked in the course of explanation of the motions of bodies, in so far as such natural phenomena, in Leibniz's view, occur by means of mechanical principles alone. He continues : "I fully agree that all particular phenomena of nature can be explained mechanically if we explore them enough, and that we cannot understand the causes of material things on any other basis."¹³

A mechanical explanation of natural phenomena, for instance of the motion of animals, is only possible if the status of "mechanism" is conceded to entities that consist in infinitely many other mechanisms or machines of nature, each of which is a complete corporeal substance, having its own body and its own substantial form. On this view, the animal's body is no less a machine than is a clock, even though the animal's machine is infinitely more complicated than the clock. Leibniz writes in 1705 that he has "no need to resort, as does Cudworth, to certain immaterial plastic natures," in so far as "this infinitely complex organism provide[s] me with material plastic natures that meet the need."¹⁴ If a human

¹² G IV 391.

¹³ G IV 390. "Ego plane quidem assentior omnia naturae phaenomena specialia mechanice explicari posse, si nobis satis essent explorata, neque alia ratione causas rerum materialium posse intelligi."

¹⁴ L 959.

mind were capable of grasping the infinite complexity of a machine such as the animal's body, that human would see that its motion can be explained in a way that requires no more appeal to incorporeal principles than does the explanation of the motion of billiard balls or falling rocks.

While the motion of the animal's body can be explained without invoking the presence of a soul, but only the infinitely complex structure or infinite partedness of the animal's body, still it is an essential part of Leibniz's pananimalculism that each of the infinitely many parts of an animal, and indeed of the world, be ensouled, though this soul does not play a role in the motion of bodies. Leibniz wishes to replace the immaterial plastic natures of Masham's father with a notion of organicity, according to which the motion of a corporeal substance's infinitely parted body can be explained without appeal to an incorporeal principle, and according to which soul or life is a mere concomitant to the material component of a substance, playing no explanatory role in the motion of the material component.

In sum, while Leibniz tells Masham that he "in general admits" the plastic natures of her father, he alters the notion in two important ways. First of all, he claims that all matter, everywhere, is governed by individual plastic or organic natures, and so leaves nothing inanimate to be kept in motion by a world soul or universal plastic nature alone. Secondly, for Leibniz there is no need to appeal to any incorporeal plastic nature in the explanation of natural phenomena: "I have no need to resort with M. Cudworth to certain immaterial Plastic Natures."¹⁵ Instead, for Leibniz the plasticity or organicity consists in the infinite complexity of a corporeal substance's composition, a complexity which could, in principle, be fully explained in mechanistic terms. While there is indeed an incorporeal component of substances, this is not something existing independently of the composite substance, and it is not something that needs to be brought into the account of natural phenomena

Even though all of physical nature can be explained mechanistically, without having to appeal to the "je ne sais quoi" that Leibniz sees Cudworth as invoking, this exhaustive explanation of physical nature would fail to capture a great deal, since nature, as Leibniz sees it,

[h]abet... imperium in imperio, et ut ita dicam regnum duplex, rationis et necessitatis, sive formarum et particularum materiae, quemadmodum enim omnia sunt plena animarum, ita et organicorum corporum. Haec regna inter se inconfusa suo quodque jure gubernantur, nec magis ratio perceptionis atque appetitus in modificationibus extensionis, quam ratio nutritionis, caeterarumque functionum organicarum in formis sive animabus quaerenda est. ¹⁶

[h]as an empire within an empire, a double kingdom, so to speak, of reason and necessity, or of forms and of the particles of matter, for, just as all things are full of souls, they are also full of organic bodies. These kingdoms are governed, each by its own law, with no confusion between them, and the cause of perception and appetite is no more to be sought in the modes of extension than is the cause of nutrition and of the other organic functions to be sought in the forms or souls.

Leibniz writes that these two kingdoms "everywhere permeate each other, yet their laws are never confused and never disturbed" by one another.¹⁷ The two kingdoms, are not, as it were, separate but equal; the mechanical laws of nature are, for Leibniz, derived from higher, moral laws, which must be invoked only in establishing the "general and remote principles" of the functioning of nature. In this sense, the kingdom of grace underlies the kingdom of nature. Any particular natural phenomenon can be explained "by quantitative

¹⁵G VI 544. "Je n'ay pas besoin de recourir avec M. Cudworth à certaines Natures Plastiques immatérielles."

¹⁶ G IV 391.

¹⁷ L 723.

and geometrical considerations alone;"¹⁸ however, when it comes to general explanation of the reasons for natural phenomena, Leibniz believes that "we must also consider how these mechanical principles and general laws of nature themselves arise from higher principles."¹⁹

Leibniz thus sees a mechanist such as Descartes, who believes that "no other principles are necessary for the explanation of natural phenomena than those taken from abstract mathematics, or from the doctrine of size, figure, and motion," as mistaken, in so far as this sort of mechanism fails to consider how it is that mechanical principles and general laws of nature themselves arise from higher. At the same time, Leibniz sees vitalists such as Cudworth, who believe that an incorporeal principle is needed to describe the "immediate and particular causes of natural things,"²⁰ as abandoning mechanism too readily. Like the Scholastics, Cudworth errs not in holding to immaterial forms, but "in applying them where [he] ought rather to have sought the modifications and instrumentalities of substance,... that is, mechanism."²¹ As Leibniz similarly has Théophile say to Philalèthe : « [L]e mouvement de la plante qu'on appelle sensitive vient du mécanisme, et je n'approuve point qu'on ait recours à l'ame, lorsqu'il s'agit d'expliquer le détail des phénomènes des plantes et des animaux » (109).

In opposition to Cudworth, Leibniz sees the activity of living beings as explicable wholly in mechanical terms. In order to understand the possibility of such explication, Leibniz thinks, the mechanism of the living being must be understood as one that is infinitely complex, consisting in infinitely many machinic parts. Leibniz calls such an infinitely

¹⁸ G IV 391. "...per solam quantitatis ac rerum Geometricarum considerationem posse explicari."

¹⁹ G IV 391. "...considerandum censeo, ipsa Principia Mechanica, Legesque adeo naturae generales altioribus principiis nasci nec per solam quantitatis ac rerum Geometricarum considerationem posse explicari."

²⁰ L 722f.

²¹ G IV 391.

complex mechanism an "organism." Leibniz does believe that each of the parts of an organism is ensouled, but does not believe that the spiritual component of an organic part needs to be introduced into any account of why the part -with respect to its materiality- moves in the way it does.

Cudworth would see such a position as absurd, in so far as he thinks it requires that the capacity for perception be granted to every part of matter in the world. For Leibniz, however, the fact that higher, soul-based principles need play no active role in any account of immediate efficient causes in the material world, rather than positioning the soul in a powerless role, subordinate to matter, is simply a consequence of the distinction between the two different kingdoms constituting all of reality. In the kingdom of nature, the order of efficient causes unfolds with no influence from the souls in the kingdom of grace. While the phenomena in the kingdom of nature can be explained by appeal to efficient causes alone, by nothing other than geometric and quantitative principles, in order to explain the reason for these principles, higher principles, from outside of the order of efficient causes of natural phenomena, must be brought into consideration. A mechanist such as Descartes is mistaken only in so far as he fails to understand that, ultimately, higher principles must be adduced for explaining natural phenomena, a vitalist such as Cudworth is mistaken only in so far as he resorts to higher principles *too quickly*, where mechanical explanations would do just fine.

Now, on to Locke, or at least to Philalèthe, Leibniz's version of Locke in the *Nouveaux essais*. On the very first page of Chapter I of the *Nouveaux essais*, Leibniz mentions Cudworth and his daughter as two of England's greatest assets. He notes that the latter is of particular importance in virtue of her close connection with the author of the *Essay Concerning Human Understanding*. Leibniz then has Philalèthe summarise what he takes to be this author's principle views :

- (i) il est pour le vide et pour les atomes ;
- (ii) il croit que la matière pourrait penser ;
- (iii) il croit qu'il n'y a point d'idées innées ;

- (iv) il croit que notre esprit est *tabula rasa* ;
- (v) il croit que nous ne pensons pas toujours (55).

We have been focusing on the second and the fifth of these. Something that hasn't been emphasised enough, though, is that Philalèthe takes the impossibility of innate ideas, item (iii) in the list, as flowing from the impossibility of what Leibniz would call *petites perceptions*. « [D]e dire qu'il y a des vérités imprimées dans l'âme, qu'elle n'aperçoit point, c'est, ce me semble, une véritable contradiction » (60). The problem, then, is not with innateness itself, but with any bit of knowledge that isn't consciously before the mind, no matter how it was originally obtained. Thus, in an important sense Leibniz's response to (iii), (iv), and (v) is one and the same : innate ideas are permissible, since there is always some sort of mental activity going on, and this latter becomes acceptable once it is appreciated that not all thinking involves presentness to consciousness.

Recall from the earlier discussion that it is also in terms of *petites perceptions* that Leibniz seeks to account for organic unity. The doctrine of *petites perceptions* leads directly to the doctrine of conspiracy. And organism is just the mutual conspiracy of all parts of some composite substance to engage in a shared or unified activity. It is also in terms of organic unity, as we have seen, that Leibniz is able to account for the structure and activity of bodies without having to concede, as Cudworth had suggested would be necessary, that matter *as such* possesses perception and understanding. And thus he is able to dispense with (ii), the belief he attributes to Locke that matter could think. I will leave aside the question of atoms and the void for now, but will mention *en passant* that at this point Leibniz believes he has the tools to deal with this point in the same fell swoop as the others.

The interconnection of the various Leibnizian doctrines we have been focusing on, particularly of *petites perceptions*, conspiracy, and organism, is one that appears to have fallen into place in Leibniz's own understanding over roughly the decade or so preceding his engagement with Locke's philosophy, in large part as a consequence of his close interaction with Locke's countrymen, and women, during these years, particularly with

Cudworth and Masham. This interaction, I would like to suggest, was a good propaedeutic to the challenge Locke's philosophy posed. I will not say that, by the time he comes to Locke, Leibniz is equipped with readymade responses. But I do think that it is important to understand the *Nouveaux essais* as the product of an engagement with English philosophy that goes rather far beyond Locke himself.