

Reason and Emotion in the Early Enlightenment¹

Noga Arikha

*The Brain -- is wider than the Sky --*¹

Married to an absent military man, the virtuous Présidente de Tourvel, in Choderlos de Laclos's *Les liaisons dangereuses*, is one of literature's great epistolary victims. Step by step, the reader follows her fall - her seduction by the rogue Valmont - as her letter-writing style disintegrates: controlled, lucid, elegant prose at first; desperate, choked and formless later on. Clarity of purpose is Valmont's chosen weapon for the duel he sets up between resistance and conquest. His strategy is to feign virtue, both in word and in action. His tactic is persuasion. Persuasion wins: Valmont's reasons overwhelm those of 'la belle Prude'; his style, a feat of rhetorical manipulation, sways her. Once unleashed, her sentiments are uncensored. They lie beyond the scope of rhetorical description because, by the end, they are the truth of her present, corporeal, entirely passionate state - unclothed, even transparent. By contrast, Valmont's partner-in-crime, the powerful Marquise de Merteuil, cultivates a lucidity, a literally admirable brilliance, that clothes her passions and emotional play.

All the action in this novel is epistolary. It is entirely made out of verbalized, communicated knowledge, reasoned argumentation and subjectively ordered narrative. Its subject-matter is sexual seduction, of course, but beyond that, in its very form it explores how discursive reason is embedded within emotivity, how emotivity may become entwined around discursive reason, and how the two manipulate and mold each other. Self-consciousness is pursued through the act of writing, during the taking-stock of emotional life. For the reader, this self-consciousness fails to mask the self-deceit it burnishes, while, for the cynical protagonists, emotions and passions are the mere details without which there

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would be no game. The novel stages the thinking, political, strategic mind, operating within a context of refined but already decadent and self-destructive *libertinage*. Valmont and especially Merteuil are the intelligent instigators of action, and the body's passions are not so much the center of action as its tool.

Les liaisons dangereuses had its first print run in 1782. *Clarissa*, published some thirty-five years earlier, is often cited as its immediate antecedent, and probably should be discussed in this context. But my purpose is not to tell a history of the epistolary novel in the Enlightenment; nor to explore the development of 'sensibility' in the period. I began in pre-Revolutionary France, so late in the day with respect to the title of this paper, in order to be in a position now to retrace the origins of this view, at once familiar and sophisticated, of the mutual enforcement of potent reason and forceful sentiment. The interplay of the one with the other is the stuff that ethical deliberation works with; and such deliberation gains from exposure to a literary vocabulary which encapsulates, rather than analyses, what is entailed for the human observer to make intellectual sense of the diverse, inter-connected strata that constitute our emotional and mental lives. In both content and form, the epistolary exertions of *Les liaisons dangereuses* embody this drive to observe emotion and behaviour through the sole means of the rational mind. The situation of the Présidente de Tourvel until her seduction illustrates the two-way relation of reason and emotion perfectly: a sense of despair (emotion A) which arises out of an attachment (emotion B) that destroys social and psychological order and appeals to vanity (emotion C) coexists with a moral sentiment whose very existence depends on the awareness of a primitive conflict between appetite and duty. This moral sentiment, in turn, can give rise to the fear (emotion D) that it will not be strong enough to sustain the rationally mediated awareness of consequence. Embedded within the conception of moral action is thus a series of emotions, joined together to form the psychological and epic narrative of the event.

Deliberations about moral action still tend to be connected, however subtly, to the Cartesian notion of a self split between steady, supervising reason - imbued with knowledge of what constitutes right action - and fluctuating passion - itself 'right' insofar as a beautiful object, say, might 'rightly' trigger the desire to possess it. But this Platonic, divided self is not as clear-cut in its duality as stereotypical notions of the rationalist, post-Cartesian, Enlightenment era would have it. The realm of knowledge was gradually redefined during the period known as the Scientific Revolution, in the early Enlightenment; so was the mind

of the knower. It was an intricate process which allowed room for integrative, rather Aristotelian approaches to emotion. Susan James, in her book on the emotions in the seventeenth century, remarked on the ‘parodic interpretation of the processes by which knowledge is attained’ that results from ‘splitting off reason from passion’², and noted that this division has nourished the practice of mainstream analytic philosophy as much as the study of early modern philosophy. The trend is in the process of being reversed by now. Emotions are, in effect, the talk of the town; and philosophical and scientific research on emotions is yielding a much more complex picture of what boundaries exist - if any - between reason and emotion.³ But I would like to show that the historical analysis of this subtle, perhaps merely epistemically valid division can bear philosophical fruit especially in the context of the growing body of scientific work on the nature of emotion, which Susan James does not consider. Emotions are part of the discourse of ethics, which themselves are often related to the philosophy of action and to metaphysics; but the possibility of accounting for emotions in scientific terms forces a confrontation, much more rare, between the realms of ethics, on the one hand, and of the sort of philosophy of mind which takes on the brain sciences, on the other. Ethics and the philosophy of action take for granted the existence of an agency - a rational and emotional mind. But what is this biological mind that is capable of agency? Can the mind that is the subject of ethical deliberation be the same mind - the brain - that is the object of empirical study?

The title of this paper, then, is misleading. I will be concerned with reason, with emotion, and with the early Enlightenment. But my central focus is the fate of the sense of value - ethical or aesthetic - in the ‘disenchanted’ world of our scientific, digital age. Since the sense of value is inflected emotionally, we need to examine the psychological status of scientific accounts of human emotion, and the role of reason in explaining emotion. Insofar as this question is a take on the so-called mind-body problem, it is a philosophical one; but the approach here will be genealogical, rather than partaking specifically and exclusively of either the history of philosophy or the history of science, the philosophy of mind, or the cognitive sciences. In this way, I do not deal directly with the scientific literature on emotions, much of it fascinating, which is growing every day. Rather, I shall recount how early modern treatises which were concerned with the body’s passions dealt with the notion of moral responsibility. During the seventeenth century, traditional, broadly Galenic assumptions about the humoural, hydraulic nature of emotions were integrated into the new,

mechanistic and corpuscularian views of the body - notably those of Descartes and Cartesians generally - as well as into the anti-mechanist, anti-dualist streams that would later feed into sensationalism. My ultimate purpose, again, is to address in this diachronic manner the technically arduous but important question of how a naturalistic understanding of the mind, such as that given by the cognitive sciences today, can be reconciled with a foundationalism with regard to ethics - or, succinctly put, how we can hold on to value in the absence of teleology.

The difficulty of answering this question is in part due to the complexity of the very operation of asking it. In the *Spectator* of July 2nd, 1712, Joseph Addison (1672-1719) mused about 'the proper limits, as well as the defectiveness, of our imagination; how it is confined to a very small quantity of space, and immediately stopped in its operations, when it endeavours to take in very great, or very little.' Imagination was here depicted as a container of sorts which marked the concrete, outer boundary of reason. Reason, wrote Addison, was capable of pursuing 'a particle of matter through an infinite variety of divisions',

but the fancy soon loses sight of it, and feels in itself a kind of chasm, that wants to be filled with matter of a more sensible bulk. We can neither widen nor contract the faculty to the dimensions of either extreme. The object is too big for our capacity, when we would comprehend the circumference of a world, and dwindles into nothing, when we endeavour after the idea of an atom.

It was very well to derive knowledge from indirect sense-experience that there existed infinitely large and infinitely small dimensions; but the *fancy* - the imagination - was incapable of doing much about it. Reason had its reasons, while we were bound to fancies of our own dimension. We could not imagine ourselves out of our human sphere, however capable we were of accepting as reasonable the knowledge that other dimensions existed, and that we were experientially bound within this limited sphere of ours. Experience, in other words, had little to do with reason's work.

A few years earlier, Locke had expressed a similar notion in his *Essay Concerning Human Understanding*: acknowledging that there were hidden worlds - such as particles within blood - which it was the mission of the natural sciences to uncover, he nevertheless hesitated

to accept that we were in a position to understand fully what we did not see directly. Indeed, with any alteration of our senses, he wrote, ‘the appearance and outward Scheme of things would have quite another Face to us; and I am apt to think, would be inconsistent with our Being’, for they would ‘produce quite different *Ideas* in us’ (II, xxii, 12). Hidden worlds could unsettle our gaze and our position in the naturally knowable world. Lockean ideas originated in the senses; but they were cogitations produced by the imagination. At once dependent on our senses and limited by them, the eighteenth-century imagination was central to ordinary cognition and to the capacity for wonder, but also a measure of what one should deem ‘inconsistent with our Being’.

I would like to stay for a while with this notion that a form of knowledge may be ‘inconsistent with our Being’. The immediate, historical context of this statement deflates it somewhat, if one considers that Locke was, generally, trying to define what constituted the bounds within which human knowledge was possible, and desirable in social terms. Taken on its own, however, the statement certainly points to the centrality of the knower’s mind in evaluating the usability, that is, the relevance of scientific data. Awareness of the problems that naturalism has posed to epistemology was well summed up by Quine in 1969, in ‘Epistemology Naturalized’, where he contraposed the ‘meager input’ of natural causes into our senses and the ‘torrential input’ of scientific knowledge. In a similar way, naturalistic accounts of emotion, passed on from antiquity, posed - and failed to resolve - the question of the status of the new science with regard to the morally perplexed, emotionally confused, natural (embodied, humoural) but socialized (communicating, verbal) human being, still well represented, decades after Locke, by our *Présidente de Tourvel*. The unease generated today by the expulsion of teleology from the biological analysis of mind, emotion and consciousness is not very different from this early modern distrust of naturalism. This distrust is a matter of some complexity, at a time when life sciences - particularly genetics and the neurosciences - are growing in sophistication, that is, in their capacity to give us a sharp picture of the structures of which our organisms are made. Brain imaging techniques are helping us identify in increasingly precise terms what is going on in the brain when we feel pain, for instance, or when we recognize the face of a loved one.

But our experience of fear, or of facial recognition, is very different in kind from our perception of whatever we are able to detect on an fMRI scan. Granted, this trivial difference should not detract from the explanatory value of brain imaging techniques, but it

does point to the problem of accommodating the objective language and objectifying methodology of science to the study of human subjectivity. So for example, it is hard to know what to make of an evolutionary account of anger, say, or what to do with a neurobiological analysis of fear. Even if one accepts that a mental state, such as fear, is fully reducible to its cerebral correlates, such as activity in the amygdala, the awareness of this reducibility will have nothing to do with the experience of fear and will not formally differ, in the first instance, from the very different claim that fear is merely redescribable as activity in the amygdala. In this way, a naturalized, biological account - whether evolutionary, modular, or neurophysiological - of fear or jealousy will not automatically help us know how to act in the presence of these emotions: raw descriptions of this sort are indeed value-free from an ethical point of view.

On the other hand, the view that mental events bear a causal or functional relation with the brain's biochemistry can have instrumental value when applied to the care of mental illnesses amenable to chemical treatments. Jonathan Glover recently devoted his Tanner lectures to what he has named 'humanist psychiatry', which acknowledges schizophrenic, or manic-depressive, or 'split-personality' patients as whole persons - and thus full moral agents regardless of their state of mind - and takes seriously the ill-defined nature of the boundary between the person and the illness. The problems addressed in those lectures are increasingly discussed within the fields of ethics and the philosophy of psychiatry. But a philosopher of mind might argue that the foundations of Glover's laudable stance depend on a conclusive account of the ways in which a relation of some sort between mental events and brain states is non-deterministic with regard to a sense of selfhood, consciousness and so on. If one prescribes Prozac on the perfectly plausible basis that depression is, to some extent, or, as might be the case, fully caused by a dysfunction of serotonin secretion, what exactly are the criteria for evaluating the border beyond which the person's sense of self is not fully determined by neurotransmitters? In other words, *how* do we find out what, the person or the illness, the psychiatrist is treating, and how do we define the one versus the other? And if, conversely, the 'person' is definable, say, in terms of the Lockean concept of a unity of self, where does that leave our limited knowledge of cerebral activity? Shouldn't we at least be referring to those amply documented, but not fully interpreted, stories of brain-damaged patients whose body-image has changed dramatically?⁴ It is probably true that the neurological, molecular, chemical, electric functions of the brain are so numerous that

determinism can, and should, be kept apart from all levels of reductionism. But the conceptual moves to do so are complex, and, again, inconclusive.⁵

Such questions might not seem problematic from a scientific point of view, but this is precisely why they do promise much philosophical meat: as Andrew Solomon wrote in his book on depression, *The Noonday Demon*, ‘Hippocrates is, in effect, the grandfather of Prozac; Plato is the grandfather of psychodynamic therapy’.⁶ In crude terms, one may say that the one trades in physical events - effects; while the other deals with - putative - mental causes. At issue is the problem of bringing the two together to form one account, if not one practice. This cannot be a simple task, partly, or perhaps especially because of the very nature of the mind without which there would be no scientific enquiry in the first place. When I am sad, say, or feel emotionally confused, I can be sure that reason stands, untouched, a constant observer, a guarantor of the self’s narrative unity. The differentiation of the ‘emotional’ brain from the traditionally ‘higher’, neo-cortical, thinking brain, matches our introspective sense of a functional division between the two contemporary events. But this sense is itself fragile. Certain cases of brain-damage can distort precisely the sense of the unity of consciousness, of Kant’s ‘transcendental unity of apperception’. Our capacity to postulate theories about the world and about ourselves is not immune from error. Yet the possibility that our capacity to posit a concept such as ‘transcendental’ might well be a product of brain structure need not unravel the very bearing of the concept of ‘transcendental’.

Emotions are complex partly because they are the product of perceptions or sensations, and sometimes of thoughts, and can themselves cause further perceptions, sensations or thoughts. They can range from sense-driven reactions to overlapping cognitive states such as those experienced by the *Présidente de Tourvel*, and which involve appetite, thought, and will, as well as the sadness, despair, anger and joy that, for the scholastics⁷ as much as for contemporary emotion theorists like Paul Ekman,⁸ are a few of the ‘officially’ registered emotions. The new science of emotions, however, is as young as is ancient the art of observing them; and it is faced with the humanist’s interpretive difficulties shared by all mind sciences. This is why a historical perspective helps. The first-century physician and philosopher Galen understood emotion as humoral, as the product, or equivalent, or correlate (it was not clear which) of physical substances; the interpretive problems this

notion gave rise to are, in some sense, still ours. Again, and as I'll explain in a minute, the physiology derived from Galen remained standard fare beyond revolutions in anatomy from the sixteenth century on - which revised many Galenic beliefs about anatomy previously held as sacrosanct - and beyond the breakdown, during the scientific revolution in the seventeenth century, of the faculty psychology on which this physiology depended.

But as with most tenacious models, major presuppositions about the nature of mental function remained beyond the demise of faculty psychology, even as their meaning and import shifted along with the culture - and beyond Descartes. Passions continued for a while to be tied to the irascible and concupiscible functions of the sensitive soul of the scholastics, that is, to motions that were triggered by exposure to objects liable to cause passions. Treatises on the passions which dealt with such matters were conceived as moral guides; but their basic assumptions concerning the mind-body interaction were informed by this hybrid psychology whose roots were historically 'long' and whose outlook was not especially novel. The very language of such treatises came from Plato and Aristotle via Augustine and Thomas Aquinas, and was rooted in the ground of Stoicism and Epicureanism. Within that scheme, reason had the same relationship to passion as it did to body.

François de La Mothe Le Vayer (1588-1672), for example, a statesman, magistrate, Pyrrhonist, scholar and tutor to the brother of Louis XIV, the Duc d'Anjou (later Duc d'Orléans), in his didactic compendium *De l'instruction de Monseigneur le Dauphin*,⁹ argued that there was a fundamental difference between 'moral action and human action'.¹⁰ Moral actions depended on the presence of the will, and of the understanding - 'entendement' - which was necessary to the will.¹¹ Other human actions were those performed either under constraint, or by 'madmen, little children, and sleepers', or were indifferent gestures, which 'tended neither to vice, nor to virtue' - those which 'make you hop with joy, wander without a purpose, pick up a wisp of turf or brush up our moustache'.¹² This sort of ethics was based on a voluntarism which guided at once conduct and deliberation about conduct, and which was a central feature of the Thomistic psychology favoured during the Renaissance. For La Mothe, we thus had two appetites, one rational - 'raisonnable' - and dependent on the will; the other sensitive, 'sensible', pertaining to beasts as well as passions. The sensitive appetite, in turn, was either concupiscible, and led us to seek out the good and flee the bad; or irascible, which reacted to the difficulties that resulted from the attractions or repulsions of

the concupiscible appetite.¹³ The functions of the rational appetite or soul differed from those of the sensitive appetite or soul, insofar as they pertained to cogitation, imagination and memory; reason was thus necessary to the existence of a moral sense which, in turn, was central to this picture of mental organization. Actions, whether good or bad, were excited by passions, wrote La Mothe, and so in order to understand actions, one had first to consider passions, ‘named perturbations by the Latin philosophers, and indeed they are natural emotions, which take place in the sensitive part [of the soul], where they are based’.¹⁴ Moral responsibility therefore depended on awareness mediated by reason, which, in turn, had a cognitive impact on the other appetites.

On this basis, treatises on the passions could proceed apace, unimpeded by revolutions in physics or metaphysics. More to the point, practical guides to the well-being of noble souls belonged to the realm of moral philosophy, which itself included ethics, politics and economics. La Mothe’s guide - which was highly regarded in mid-18th-century France and was printed by the Dresden publishers of Hume in French¹⁵ - contained all three. Psychology was a different matter, and concerned the fate of the tripartite soul. Although, again, faculty psychology was rapidly losing credibility in the seventeenth century, it continued to be taught in schools, and, as is apparent here, in no way did it vanish overnight to be replaced wholesale by a brand new system. La Mothe was a *savant* who was happy to cite Clement of Alexandria’s epithet for lust, ‘la Metropolitaine de tous les Vices’, just as he was comfortable with the notion that young people, and all those who had boiling blood, were easily prone to entertain hope - on account of their inexperience - and that the old, whose blood was cold, found it hard to do so - because of their experience. (Blood seemed to be there for good form; but that in itself is significant.)

The concordance of emotion with bodily motion was by that point a trope, sustaining treatises on physiognomy and aesthetics, as well as the practice of caricature, for instance. Marin Cureau de la Chambre, royal physician and one of the founding members of the Académie des Sciences created by Colbert in 1666, began his own treatise on the passions with the popular view that ‘la Nature’ had endowed the human face with a faculty of expression akin to language, for the sake of ‘la vie Civile’ to which it, Nature, had destined man: ‘so that if his word were to belie his heart, his face would belie his word’.¹⁶ It was evident that ‘the body changes when the soul is moved’,¹⁷ and that emotions were made manifest via moral and corporeal ‘Characteres’, as he called them. Human actions, the

former type of character, were the internal emotion formed by the object in the appetite - actions were due to emotions that were caused by objects.¹⁸ The latter type of character was due to an 'Air sur le visage', a 'je ne sçay quoy' brought on by the passion, 'and which virtue brings into its actions a certain grace, a pleasant countenance which is not found in vicious ones'.¹⁹ This 'Air' could be perceived in portraits: 'the grace of a beautiful face can be expressed through colour'.²⁰ Grace was inherent in the colour, figure and movement of parts and spirits, but, just as sounds were only pleasant insofar as they bore a certain proportion to one another, so these visual elements had to bear a relation to one another 'which pleases the eye and contents the soul'.²¹ Beyond that, Cureau was not sure about what exactly grace, or that 'Air', was, but he was sure that it was contained within passions and moral actions, and that it was a function of movement. The cause of movement needed to be investigated in order for the nature of passions to be understood - emotions of the appetite 'by which the soul moves towards the good and away from the bad', through the agency of the animal spirits.²² The soul probably caused the spirits to move about in ways which depended on each passion, since the appetite - irascible or concupiscible - had a different emotion and goal for each passion.²³ It also provoked those parts of the body which could engage in usually useful, well designed voluntary movement - although 'How many wasted steps, ridiculous postures, and useless words in the passions?'²⁴ The soul, in other words, used moral 'Characteres', through clear and distinct knowledge, in order to obtain what the passion was geared at obtaining; while the corporeal 'Characteres' were those it used purely by instinct, which arose without its intention.²⁵

This was an elaborate set of variations on a theme, an intricate, subtle danse around the spirits and moral mind. Its purpose was not to enlighten a young prince, in line with royal educational protocol, as was that of La Mothe's treatise, but to demonstrate the centrality of proportion to moral worth, equated throughout with physical beauty. The two treatises are each an instance of learned disquisition centered on commonly accepted theories of psychology. But classical erudition could merge with medical erudition, too, in a variety of ways, and erudite anecdote could be paired with diagnostic conjecture. The soul, as we see, was defined by tradition, and its pathologies became the stuff of literature, sometimes recycled by physicians from their case studies. Earlier, Robert Burton took it for granted that:

the distraction of the mind, amongst other outward causes and perturbations, alters the temperature of the body, so the distraction and distemper of the body will cause a distemperature of the soul, and 'tis hard to decide which of these two do more harm to the other. Plato, Cyprian, and some others (...) lay the greatest fault upon the soul, excusing the body; others again, accusing the body, excuse the soul, as principal agent.²⁶

The ascription of cause, action, diagnosis, judgement, scholarly source, could go round and round, yielding, for one, the riches of Burton's ever popular tome. But the 'serious' mind science, the equivalent, if you will, of our cognitive science (aloof from neuroanatomy as it often tends to be), was not being carried out by physicians, anatomists, natural philosophers, lawyers, state officials, or dilettantes of the soul: it was mainly in the hands of metaphysicians, including, of course, those bequeathed to the eighteenth century, and to the modern philosophical canon. Descartes, for whom medicine was all-important (it was, as he famously said, the highest branch of the tree of philosophy, whose trunk was physics and whose roots were metaphysics),²⁷ did, certainly, bring about major intellectual changes. Yet his system, crucially, depended on its antecedents too.²⁸ In a letter to his friend Regius, a Dutch physician at the university of Utrecht, he could thus write: 'there is 'only one *soul* in man, that is, the *reasonable* soul, for only actions which depend on reason can count as human actions'.²⁹ The will was an aspect of reason, and could not be the efficient cause of physiological processes such as digestion or heart-beat, nor the immediate cause of physical motion, as was usually believed. Rather it determined the course of the animal spirits which travelled from the heart to the brain and from there to the muscles.³⁰ Our soul was at once sensitive and rational; 'and all its appetites are wills'.³¹ This is a suggestive instance of the historical positioning Descartes was effecting in order to succeed in his ambition to replace the Aristotelian system with his own: novel structures were dug within old turf.

Likewise, for Descartes the mechanisms of sensation remained dependent on the motions of those 'animal spirits' which were constitutive of the original humours coursing through the body. It was also the case with emotion. Their lightness and velocity enabled spirits to travel from the heart to the brain, independently of the will. Even as he turned the mind into an unextended thinking thing, separate from the fully mechanized body, Descartes resorted to them to explicate the passions of the soul. These spirits were amphibian creatures, midway between body and soul, and in no need of further definition, or reduction. Emotional events thus remained identifiable with physiological ones, albeit this now

mattered in the microscopic and causal, not in the macroscopic and merely anecdotal realm. And the more knowledge - revealed by medicine - one had about this nexus, the better equipped one was to deal with one's passions.³² This physiology underlay a Stoicist sort of ethics, not dissimilar from that of the earlier Guillaume du Vair, say, or of Scipion Duplex.³³ In the *Principes de la philosophie*, the *Passions de l'âme* and throughout his correspondence (especially in his letters to Princess Elisabeth), Descartes presented the view that it was the duty of ethics - the highest good in life - to define both what virtue was and the means, *given our dual nature*, to attain and live by it.³⁴ And if medicine was instrumental in the realization of moral soundness, it was because 'the spirit is so dependent on the temperament'.³⁵

This notion certainly introduces some murkiness into the purity of what is generally meant in modernity as Descartes's avowed substance dualism (which in fact is of Augustinian pedigree rather than original to Descartes). For Descartes, in effect, the very process of formulating how physical and moral beings could regulate their behaviour so as to accommodate needs and duties to each other relied on the notion that the rational soul participated in the activities of what, until then, had been the appetitive and sensitive souls - and vice versa. The resulting picture of a humoral organism knowable by a reason that could inflect it did, however, rely on a dualist psychology, an implicit version of which was still bolstering in part the resistance of the 'dévoté' Présidente de Tourvel to the disturbances of love - unsuccessfully, as it would turn out. But on her view, the mere attention to emotions, let alone passion-driven action, entailed the failure of virtue, rather than its pursuit. Once she had given in to her passion, however, attention to its object was itself an act of virtue - a justification she could use for believing in the rationality of her second-order decision to accept her first-order decision to give in to her inclination.

Moral action, for the Présidente, thus entailed knowledge of causal relations, just as La Mothe and his contemporaries, as well as his predecessors like Scipion Duplex,³⁶ would have agreed; and knowledge of causal relations depended on ratiocination, on the 'entendement', which in turn could bear on our emotional states. Descartes's most noteworthy legacy to the later Enlightenment consisted in his relying in this way on the accessibility to the conscious mind of the phenomena of sense, including emotion, in order to turn self-consciousness into the proof of dualism. This was the novelty of the *cogito*: we were aware of mind-body duality thanks to the operations of the very reason which discovered its nature. And once he had turned all consciousness, including that of emotion,

into a feature of the disembodied soul, emotions themselves could seem mechanized, analysable by a rational, scientific mind - whether by the ordinary, emoting person, or by the natural philosopher. The resulting 'man-machine' quickly became a bogeyman, while atheism was easily imputed to those philosophers, most notably Hobbes and, in a league of his own, Spinoza, who wanted to show that the emotions - the internal world of the human subject - could be described in the same terms as those used to describe the physical world and our sense-mediated access to it.³⁷

The hiccupy but definite rise of naturalism in the seventeenth century - in the form of mechanism, corpuscularianism, versions of hylozoism and vitalism held by the likes of Leibniz and Stahl - was accompanied by the metaphysical, epistemological, and ethical uncertainties that resulted from squeezing Galenic and Aristotelian teleology out of the biological picture.³⁸ As a result, it was tempting to mix and match old souls and new bodies - even without the teleology so perfectly preserved by Aristotle's forms - as did the great physician and anatomist Thomas Willis, following the Gassendist trend of re-injecting vitalism into the machine of the body. Animal spirits in the *sensus communis* continued to play a central role with Willis, who differentiated their respective role in the cerebrum and in the cerebellum, and in the aetiology and nosology of madness.³⁹ By the late seventeenth century, psychiatry began to turn on the notion of nerves, although the soul remained a 'fiery substance' in the blood; senses were the passions of the soul, while motions were its actions, and both involved movements of the animal spirits, the soul's 'constitutive Particles, being moved somewhere in the System of the Nerves'.⁴⁰ The scheme of inner and outer senses remained. One Thomas Tryon (1634-1703) - 'student of physick, writer, merchant' - explicitly rejected Galen's all-too-neat 'Principle' of the four humours as 'Forms and Words, rather than Realities', while concluding that 'most Diseases arise, either from Irregular passions of the Mind, or poysonous ferments, occasioned by ill Dyet, or improper Physick of the Body'. It was the case, wrote Tryon, that:

Madness and Phrensie do generally (...) arise and proceed from various Passions and extream Inclinations, Love, Hate, Grief, Covetousness, Dispair, and the like, which do (...) break forth, violate and destroy the five inward Senses of the Soul, whence the outward Senses do arise; So that the Soul loseth its distinguishing property, and then the Imaginative property and Soul's Power becomes rampant, unbounded, or as it were without a Guide, and consequently such a Soul is unchain'd, or set at liberty

from the dark Confinements of the grosser Senses and Reason, even as men in Dreams....'⁴¹

The search for knowledge about the physical functions underlying, guiding or impeding human action can be undertaken either for the sake of morals; or for *scientia*, for its own sake - regardless of the eventual applicability of this knowledge to medicine and the like (or, within a teleological framework, of its contribution to the understanding of God's creation). The latter would characterize our contemporary sciences, as well as the proud practitioners and defenders of the new science some three hundred years ago, who themselves recall the rationalists on the side of Hippocrates twenty five hundred years ago. The former would characterize treatises of moral philosophy so plentiful between the 16th and 18th centuries, such as that by La Mothe. The equivalents today might be the psychiatrists that people like Glover are trying to wean, if that is the correct verb, from the DSM. Perhaps only die-hard Cartesians like Malebranche, fearless materialists like Hobbes, and *libertins* like Guillaume Lamy, precursors of a La Mettrie, and of course of a Laclos, would have identified themselves as reductionists with regard to the physiology of emotion - and as the resigned heirs of Andrew Solomon's Hippocrates, regardless of whether the soul encapsulated as human will was of the Aristotelian or of the Platonic kind.

But the philosophical work required to tease out how, given the nature of human knowledge, moral distinctions could be objectively grounded within a civil society, became psychiatry when the mind lost its cognitive grasp. The morally inflected philosophy of action we began with, originally centered on the socialized, well instructed, well brought-up individual, was turned on its head by the time Laclos put pen to epistolary paper. In the hands of Hume, it would become a sceptical philosophy of action which integrated emotions now recast as acts of cognition related to impressions and sentiments.⁴² With Hume, emotions were at the very root of moral awareness. Today's neurosciences and cognitive sciences continue, inevitably, to take place in and to refer to a human world, in which moral and aesthetic values matter, in which life is supposed to have some sense - in which the experience of listening to Beethoven's sonata Op. 111 has intrinsic value, and in which my appreciation of a friend's gift of my favourite interpretation of the 111 truly matters. It is because of this that the outer limits of the mind sciences matter, too. On their own, these sciences, I think, cannot discover in us the seat of moral or aesthetic value, as it is sometimes

wished: data about emotions cannot tell us what emotions are to us. They can only describe emotions in their own terms, and it is unfair to the science we now know to demand that it match the thickness of literary description. The one operates microscopically; the other, macroscopically. It is the unfathomability of the gap between these two dimensions that indicates just what is at stake when Glover's psychiatrist faces a patient like the one described by Thomas Tryon.

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¹ Emily Dickinson, poem # 632.

² Susan James, *Passion and Action: The Emotions in Seventeenth-Century Philosophy* (Oxford, 1997), pp. 16-17.

³ Main studies include the scientific work of Antonio Damasio and Joseph LeDoux, and the philosophical approaches of such thinkers as Ronald de Sousa, Martha Nussbaum and Jon Elster.

⁴ Relevant works include V. S. Ramachandran, *Phantoms in the Brain: Probing the Mysteries of the Human Mind* (New York, 1998); Oliver Sacks, essays collected in various volumes such as *An Anthropologist on Mars: Seven Paradoxical Tales* (New York, 1995); Israel Rosenfield, *The Strange, Familiar and Forgotten: An Anatomy of Consciousness* (New York, 1992).

⁵ See in particular Thomas Nagel, 'The Psychophysical Nexus', in his *Concealment and Exposure and Other Essays* (Oxford, 2002), pp. 194-235.

⁶ Andrew Solomon, *The Noonday Demon: An Anatomy of Depression* (New York, 2002), p. 287.

⁷ They would have included: love, hate, desire, aversion, (pleasure, pain), courage, fear, hope, despair, anger.

⁸ See: <http://www.paulekman.com> from where one can download his main articles, especially 'Basic Emotions', in T. Dalgleish and M. Power (ed.), *Handbook of Cognition and Emotion* (Sussex, 1999).

⁹ First published in 1653, with a dedication to the Cardinal Mazarin. See François de La Mothe le Vayer, *Œuvres* (Dresden, 1761; based on the 1699 edition), Tome I, Partie II: *Sciences dont la Connoissance peut devenir utile à un Prince.*, III: *La Morale du Prince.*

¹⁰ *Ibid.*, p. 242: 'l'action Morale, & l'action humaine'.

¹¹ *Ibid.*, p. 241.

¹² *Ibid.*, pp. 242-243: 'les fous, les petits enfans, & ceux qui dorment'; 'ne tendent ni au Vice, ni à la Vertu'; 'font faire un saut de gaieté, marcher sans dessein, ramasser un fétu de terre, relever nôtre moustache'.

¹³ *Ibid.*, p. 244.

¹⁴ *Ibid.*: 'nommées Perturbations par les Philosophes Latins, & en effet ce sont des émotions naturelles, qui se font dans la partie sensuelle, où elles ont leur siege'.

¹⁵ The 'Avertissement du Libraire' to the edition of his complete works published by Michel Groell in a new edition (1755), reads: 'nous nous flattons, qu'elle sera reçue aussi favorablement que l'ouvrage politique de Mr. Hume, que nous avons publié la Foire [sic] dernière.'

¹⁶ Marin Cureau de la Chambre, *Les caracteres des passions* (Paris, 1662), pp. 1-2: 'afin que s'il arrivoit que sa parole vint à démentir son cœur, son visage peust démentir sa parole'.

¹⁷ *Ibid.*: 'le corps s'altère & se change quand l'ame s'émeut'.

¹⁸ *Ibid.*, pp. 3-4.

¹⁹ *Ibid.*, p. 6: '& que la vertu fait couler dans ses actions une certaine grace & une contenance agreable qui ne se trouve pas dans les vicieuses'.

²⁰ *Ibid.*: 'la grace d'un beau visage se laisse exprimer par les couleurs'.

²¹ *Ibid.*, pp. 8-9: 'qui plaist aux yeux & qui contente l'ame'.

²² *Ibid.*, p. 13: 'par lesquelles l'ame se porte vers le bien & s'éloigne du mal'.

²³ Ibid., p. 15: ‘Que l’une [passion] les fait desborder [les esprits], l’autre les retient dans leurs bornes : Que tantost leur cours est droit, & tantost inégal : Qu’enfin on peut dire que l’Amour les dilate, le Desir les élance, la Joye les répand, l’Espérance les tient fermes, l’Audace les pousse, & que la Cholere les jette à gros bouillons, & ainsi des autres...’

²⁴ Ibid., pp. 15-16: ‘Combien de pas perdus, de postures ridicules & de paroles inutiles dans les Passions?’

²⁵ Ibid., pp. 17-18.

²⁶ Robert Burton, *The Anatomy of Melancholy* (Oxford, 1628; ed. Holbrook Jackson, London, 1932; New York, 2001), Part I, Sec. 2, Memb. V, p. 374.

²⁷ Descartes, *Lettre-Préface de l’édition française des Principes*, in *Œuvres*, ed. Ferdinand Alquié (Paris, 1988), III, pp. 779-780.

²⁸ Scholarship on this point is growing fast. For a recent contribution of relevance here, see Daniel Garber, ‘Descartes and the Scientific Revolution: Some Kuhnian Reflections’, *Perspectives on Science*, 9.4 (2001), pp. 405-422.

²⁹ Descartes, letter ‘A Regius’, May 1641, in Descartes, *Œuvres*, II., pp. 332-333: ‘Il n’y a qu’une seule *âme* dans l’homme, c’est-à-dire, *la raisonnable*; car il ne faut compter pour actions humaines que celles qui dépendent de la raison’.

³⁰ See Descartes’s responses to the ‘Quatrièmes objections’ to the *Méditations Métaphysiques* made to him by Antoine Arnauld, in *ibid.*, p. 670.

³¹ Descartes, *Les passions de l’âme*, in *Œuvres*, ed. Alquié, III, art. 47, p. : ‘et tous ses appétits sont des volontés’.

³² Ibid., art. , p. 974.

³³ Guillaume du Vair, *La philosophie morale des Stoïques* (Paris, 1599-1603) ; Scipion Duplex, *L’éthique ou philosophie morale* (Rouen, 1610; Paris, 1994).

³⁴ See Descartes, *Principes*, ‘A la Sérénissime Princesse Elizabeth’, in *Œuvres*, ed. Alquié, III, pp. 87-88; ‘A Elizabeth’, 28 June 1648, in *ibid.*, p. 48; *Les passions de l’âme*, Art. 212, in *ibid.*, p. 1103: ‘l’âme peut avoir ses plaisirs à part. Mais pour ceux qui lui sont communs avec le corps, ils dépendent entièrement des passions: en sorte que les hommes qu’elles peuvent le plus émouvoir sont capables de goûter le plus de douceur en cette vie. Il est vrai qu’ils y peuvent aussi trouver le plus d’amertume lorsqu’ils ne les savent pas bien employer et que la fortune leur est contraire. Mais la sagesse est principalement utile en ce point, qu’elle enseigne à s’en rendre tellement maître et à les ménager avec tant d’adresse, que les maux qu’elles causent sont fort supportables, et même qu’on tire de la joie de tous.’

³⁵ Descartes, *Discours de la méthode*, VI, in *Œuvres*, I, pp. 634-635: ‘l’esprit dépend si fort du tempérament’.

³⁶ Scipion Duplex, *Ethique*, III, 7.

³⁷ Hobbes, *Leviathan, or the Matter, Forme, & Power of a Common-Wealth, Ecclesiasticall and Civill* (London, 1651), ed. C. B. Macpherson (London, 1981), I, 1: ‘sense in all cases is nothing else but original fancy caused (as I have said) by the pressure that is, by the motion of external things upon our eyes, ears, and other organs, thereunto ordained’; and I, 6: ‘That sense is motion in the organs and interior parts of man’s body, caused by the action of the things we see, hear, etc., and that fancy is but the relics of the same motion, remaining after sense.’ Although Hobbes’s account of the passions seemed to remain close to familiar shores, he, like Descartes but more radically than Descartes even, replaced Aristotelian forms, substances and species with the notion of matter in motion.

³⁸ Discussions of this problem were especially vocal within the debate on the status of animal minds, and objections to Cartesianism tended to focus on the infamous ‘beast-machine’ thesis - according to which animals not only did not think, but had no real sensations, either. They took the form of old school Aristotelianism such as that of the royal physician Marin Cureau de la Chambre, whom we met earlier - author of *De la connaissance des bestes* (Paris, 1645; followed by other opuscules in response to objections by Pierre Chanet); or of a Gassendist materialism such as that of Thomas Willis, the Oxford physician and anatomist who first coined the word neurology. Pierre Bayle’s account of this debate under the article ‘Rorarius’ in his *Dictionnaire historique et critique* is a standard reference to the beast-machine problem (first published Amsterdam, 1697). The 1740 Amsterdam edition is online and accessible to subscribers; ‘Rorarius’ is at <http://duras.uchicago.edu/cgi-bin/BAYLE.sh?PAGEIDENT=4:76>.

³⁹ Thomas Willis, *Cerebri Anatome* (London, 1642); trans. Samuel Pordage: *The Anatomy of the Brain and the Description of the Use of the Nerves* (London, 1681).

⁴⁰ Willis, *The Anatomy of the Brain*, p. 95.

⁴¹ Thomas Tryon, *A treatise of dreams & visions... To which is added, a discourse of the causes, natures and cure of the phrensie, madness or distraction. By Philotheos Physiologus* (London, 1689); in Richard Hunter and Ida Macalpine, *Three Hundred Years of Psychiatry, 1535-1860* (Oxford, 1963), pp. 233-235: pp. 233-234.

⁴² David Hume, *A Treatise of Human Nature* (London, 1739-40), ed. Norton and Norton (Oxford, 2000), 3. 1. 1., pp. 293-298.