

MEDICINE, MATERIALISM, GLOBALISM: THE EXAMPLE OF THE  
DUTCH GOLDEN AGE

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*[What follows below is the text of the address as it was given, with a certain deliberate informality in the use of terminology because of the anticipated audience, except that footnotes have been added for direct quotations. If readers desire any further decoding, they may contact the author directly.]*

I confess to feeling some anxiety about this talk. While inaugural lectures are not common in the American world I came from, I recognize the suppleness of the genre and want to honor it properly, now that colleagues have asked me for this kind of an address. I have therefore chosen to hearken back to the tradition of my betters, one in which the speaker takes the chance to introduce a somewhat personal view of a general field rather than a well-crafted close research study that people in the field, but probably only them, will appreciate. It is my hope that our

scientific and medical colleagues can be included by this means. Accordingly, I am going to take the risk of presenting several vignettes that I think are interconnected--many of which those in the field will know already--in the hope of stimulating further conversations about modernity, then and now. Medicine and science in early modern Europe--the period roughly from Columbus to the French Revolution--is a wonderful field to explore. But what hubris to pretend to really understand the causes of historical change!

To be obvious about this, then: what we are all after, I think, is a history that acknowledges the material foundations of life and culture but also explores the meanings people find in their world and the strategies they use for dealing with it, a history that gets at the ways in which our lives and ideas are imposed on us by our time and place yet also allows for the fundamental myth that people have agency--and that what they do in their circumstances makes a difference. Clinicians know this as well as historians, perhaps even better: the individual case, in its incarnate complexity, ambiguity, suggestiveness and patterns of life, also shows underlying simplicity, regularity, and materiality. The problem is always that relationship between the singular and the universal, the 'personal' and the 'impersonal', the shapeless and the meaningful.

How do we connect with real people who once roamed the earth? Let us begin with the obvious. The current historical moment shows what a complete fantasy the recently much-vaunted 'end of history' was. In tasting the human condition, we can all still recognize the metallic savor of blood and the jockeying for power. The past and present alike sometime seem a hopeless hotch-potch of bloodshed, famine and disease, brutality, ego-trips, and meaningless one-damn-thing-after-another, lightened only by the noticeable fact that even so, humans persist in expressing some kind of joy in life even after great personal tragedy: I am not the only baby-boomer in the room. Nevertheless, for some people, history-

-or at least certain kinds of it--provides an escape from the personal and tragic. One can perfectly understand, for instance, the deep feeling with which Charles Gillispie, who had served in the American field army during the campaign to retake France, turned his face away from ordinary history, which reminded him of the worst aspects of humanity, to take up first physics and then the history of science. Indeed, following the Second World War a raft of veterans, former intelligence officers, and scientists--some of whom felt personally tainted by connections to the Manhattan Project--found solace in a certain kind of intellectual history: the idealist vision in which at least one aspect of human life has showed progress, the history of the intellect searching out the underlying order of the universe. Herbert Butterfield famously claimed that the greatest event in human history since the rise of Christianity was the emergence of Reason in the form of modern science. Needless to say, he and others like him also saw the development of medicine molded according to a similar pattern. The progressive history of rationality seemed to exhibit an underlying order far removed from mere, horrific events, a history that held out one last glimmer of hope of human redemption.

I admit that there is still a place in my heart for that kind of history. And of course, standing here, I wish to honor the intellect and its history. But let us recall the subtler analysis of Alfred North Whitehead, who declared that 'it is a great mistake to conceive this historical revolt [that we call the 'scientific revolution'] as an appeal to reason. On the contrary, it was through and through an anti-intellectualist movement.' 'Faith in the order of nature' he wrote, 'cannot be justified by any inductive generalization,' echoing Hume. Yet this faith itself was a proof: 'To experience this faith is to know that in being ourselves we are more than ourselves: to know that our experience, dim and fragmentary as it is, yet sounds the utmost depths of reality.'<sup>1</sup> Whatever one may think of Whitehead's personal religion, I think his views about the fundamental importance of authentic

experience come very close to those possessed by a number of early modern authors. There is something similar in Sir Francis Bacon's injunctions about how, to know the world truly, one must be humble; pride of intellect was the first and gravest sin of the fruitless philosophers he so much despised, who thought they could figure it all out. A century earlier, Erasmus said it this way: 'And now I seem to hear the philosophers disagreeing with me. But the true unhappiness, they say, is to be engrossed in folly, to err, to be deceived, *not to know*. Nay, this is to live as a man.'<sup>2</sup> The world is not as we imagine it when we first start our journies, and we often end up in places we didn't even know existed.

The term used by early modern Europeans to describe the cause of change was the word 'passion.' Today, we tend to use the term 'emotion', and emotions are often trivialized or medicalised. But one can still hear even in the word itself the sense in which 'emotion' means the cause of motion, hearkening back to early modern ideas of change. Bacon wrote in the expected way when he stated that 'the proper objects of philosophy' were 'the principles, fountains, causes, and forms of *motion*,' and these causes of motion he in turn called 'the appetites and passions of every kind of matter.'<sup>3</sup> Bacon's sometime secretary, Thomas Hobbes, explained that 'The Passions of Man ... [cause our] voluntary motions,' and these passions in turn were caused by the 'motion in some internal Substance ...'<sup>4</sup> Passions were, in other words, the inner springs of all natural motions. To explore how people understood them is to begin one of those strange but important journies.

Today, the emotions might be described by changes in blood pressure and the production of trace chemicals, but they also produce private experiences--feelings--that no one else has access to except through the sometimes inadequate language of self-expression. Passions--to revert to that word--can obviously be provoked by the senses, or by what we term our mind: whether it be knowledge of events on a world scale or a single, simple word. They bind us, and they free us.

They contain suffering, as in the passion of Christ, as well as ecstasy, as in St Teresa's union with God. Many, perhaps most, ethnographers consider the expression of emotional life to be culturally specific, while many artists and writers consider that the feelings can be trained up to discriminate and experience things otherwise hidden or unknown. Yet some aspects of emotional life, such as suffering and joy are clearly universal. It is also clear from many investigations then and now that knowledge itself is intimately connected to the passions. Let us simply remember that all education necessarily trains us how to respond in certain ways to the world--what might be called inner disciplining--as much as it inculcates information: indeed, it is difficult to discriminate between being trained in the certain way and taking in certain kinds of knowledge.

Listen for a moment to a compatriot of Erasmus, also born in Rotterdam about two centuries later: Dr. Bernard Mandeville, famous for his Fable of the Bees, with its slogan 'private vices public benefits.' He doubted that reason itself could make people good, and as an example made fun of the vicious and petty quarrels among people like the fellows of English colleges. More importantly, he argued, while crime and incivility have many causes, they do not come from ignorance. In fact, some of the worst criminals--including mass-murderers and big-time white-collar criminals--are also very clever. Montaigne whispered something similar: 'Between ourselves,' he confessed, 'there are two things that I have always observed to be in singular accord: supercelestial thoughts and subterranean conduct.'<sup>5</sup> The bitter reaction to such views was not unlike some of the stung shouts of modern critics of socio-biology. 'You consider Man, merely as an Animal,' argued one of Mandeville's most forceful critics, '[who] like other Animals, [does] nothing but ... follow his Appetites.' But, William Law continued, his voice rising, 'That Reach of Thought, and strong Penetration which has carried Sir Isaac Newton through such Regions of Science, must truly be owing to some

higher Principle. Or will you say, that all his Demonstrations, are only so many blind Sallies of Passion?’<sup>6</sup> Well... I think this is probably a matter best answered by Richard Dawkins.

In the meantime, let us ask ourselves what is going on here, when it is enthusiastic religious figures like Law who defend reason, while cooler intellectuals like Mandeville point to what seems irrational, or perhaps a-rational forces: the passions? Early modern scientists arguing that reason is not in control, nor even the end toward which the universe is striving ... This doesn't sound like the kind of story Butterfield had in mind. Nor is it, I would say, the kind of story some post-modernists have in mind when they, too, argue about the consequences of a modern world dominated by the instruments of rationality.

If we lower our sights a bit, however, we notice that one of the most transformative processes in the history of the world was driven by passions for particular kinds of tastes--quite literally. Like all the peoples of the old world, Europeans had developed a passion for spices, especially the fine ones like pepper, ginger, cinnamon, cloves, nutmeg and mace, all of which came from south and south-east Asia. Spices were not like other foods: they contributed very little in terms of substance to a meal. But their flavors and aromas gave even insipid nourishment unusual and pleasing tastes, while when used in compound medicines they imbued them with wonderful health-giving powers, even when added in small amounts. You will find them in the medical works of the day under the heading of ‘aromatics’. It was the search for spices and for the control of them that drove the European trading ventures in Asia. As you will remember, too, the so-called discovery of America was an accident on the way to Asia. There may have been an economic downturn in the economy of the Indian Ocean of the late 15th century which co-incided with the arrival of the Portuguese which allowed them entry to the Asian markets--at least that is one current hypothesis. But in any case--unlike

the Chinese who had sent a grand fleet to the same seas a few decades earlier--the Europeans kept coming back for more because Asia produced what they desired. In exchange, silver and guns flowed out of Europe, while silver and chile peppers from the Americas travelled across the Pacific--under Spanish leadership peoples from Mesoamerica helped to conquer the Philippines, Japanese samuri stood guard over English East India Company warehouses, Armenian merchants traded in Java.... The histories of countless peoples were becoming intertwined in unexpected, even unknowable ways, in large part because of the search for the feeling of well-being that came from imbibing aromatics, and the consequent wealth it brought to the drugs barons.

As you all know, too, these movements of peoples in the search for spices used to be called the voyages of discovery, which is a fitting phrase for some of the intellectual consequences of them. After all, the new trading ventures helped to foster a kind of early information economy. Economic historians have pointed out that knowledge is a 'durable possession', like capital, and just as important to business. The kind of knowledge necessary for business can be about technical processes or contemporary events, but it can also be about particular things. The accumulation not just of things but of information--accurate, exacting information--was therefore essential to commerce. People who promoted trading ventures valued precise details. Their wealth depended on knowing about the products of nature and their uses, and on the locating, gathering and redistribution of them. As one historian of the European trading companies has put it, 'the supply of accurate information must have been one of the first things one expected of a clever merchant.'<sup>7</sup> For the 'hard-headed' merchant and other men trying to plan activities to their advantage, the foundation of true knowledge lay not in debating eternal verities but in accumulating precise and accurate information about the world.

Some of you may take for granted the importance of associating the pursuit of knowledge with what early modern people began to call ‘matters of fact’--but you shouldn’t. This was something new. The word itself came from legal discourse, and once meant a deed, a completed action, thing done--we might say, a passion brought to rest. It came from Latin *factum*, from which French took *fait*, English derived *feat* as well as *fact*, the Dutch got *feit*, and so on. But the OED suggests that late in the sixteenth century that the word started to be used in new kinds of instances. It slipped from the sense of a deed, or feat, to mean more generally something that had ‘really occurred’, and from this to ‘a particular truth known by actual observation or authentic testimony’. That is, the word started to mean the truth of an observation rather than something ‘merely inferred’. The use of the phrase with reference to bits of true information about nature--the world out there rather than the world of completed human deeds--was therefore new to the period. Barbara Shapiro, Simon Schaffer, Peter Dear, and several others have developed the point in subtle ways over the last 20 years. As Shapiro put it, a whole new ‘family of ideas’ developed, linked to the concept of knowing the particulars--that sense of time, place and detail that authors began to weave into various kinds of accounts. The high value placed on information ‘marked the endeavors of nearly all seventeenth-century [people] engaged in philosophy, the investigation of nature, religion, history, law, and even literature’. (As a corollary, this also means that the division between the sciences and the arts that we so often talk about now makes no sense, at least not for the early modern period.)<sup>8</sup> As ‘a particular truth’, a fact could be known about occurrences in nature, too, although everyone acknowledged that determining the particulars of nature was no easy task. The knowledge coming from facts and their conclusions therefore gave a probabilistic knowledge, just as the facts of a case at law can be known with a high level of probability, perhaps even with a moral certainty, but never with an

absolute certainty. But although they do not come with the kind of certainty preferred by then university professors, facts will do for many worldly decisions such as planning a voyage, as well as for describing the difference between one kind of fever or another.

Let me also say, as an aside, that many other aspects of the new philosophy owed much to the world of contract and capitalism: enormously nuanced words like ‘interest’, ‘credit’ and ‘credibility’, and ‘trust’ applied to both business and worldly knowledge. So did new techniques like book-keeping, or methods of preserving both bulk commodities and particular specimens. The masters of the trading companies even found new ways to imagine time and space. As I have asserted elsewhere, the new science was definitely not a disinterested pursuit of knowledge, despite what some continue to argue; rather, it was a very interested one, indeed.

But when ‘facts’ began to become something sought after, the investigation itself sometimes went by the Latin term *venatio*, meaning ‘to hunt’. And hunting for accurate information brought all kinds of people into the search for matters of fact, from herbwives and sailors, to alchemists and glassblowers, to merchants and civil servants and even some university professors. As Robert Boyle remarked in his Usefulness of Experimental Naturall Philosophy, mostly written in the 1650s, ‘to a Learned and Judicious Observer,’ empirical cures practiced by illiterate Europeans--even those he called ‘old women’--‘may afford very good Hints’ about new cures. In coming years, treatments like chinchona bark (or quinine) for malaria, foxglove (or digitalis) for dropsy and other circulatory conditions, inoculation, and then vaccination for smallpox, and many other therapies would all come from such so-called folk sources. Boyle even expected ‘some improvements to the Therapeutical part of Physick, from the writings of so ingenious a people as

the Chineses' as well as from experiments suggested 'partly by the Indians and other barbarous Nations'.<sup>9</sup>

In this comment Boyle was acknowledging the great resources of knowledge and skill possessed by people the world over, although he is condescending in his use of the term 'barbarian'. Jacobus Bontius would have disagreed with this characterization. A Dutch physician who sailed to the Dutch East Indies in 1627 and undertook enormous labors there in gruelling conditions--seriously ill much of the time until his death in 1631, has been called the 'father of Tropical Medicine'. He hunted for matters of fact about the plants, animals and therapies possessed by the people of SE Asia, and came to hold in high regard their knowledge. In the manuscripts he wrote, published as a book in 1642, he chastised his European brethren for their self-appointed superiority: 'And here by the way, let me observe that these nations, though called barbarous by the people in our country, excel both the Poles and Germans in pickling fish'.<sup>10</sup> As if this were not enough, the people who come from Surat and the Coromandel coast were exacting botanists, having, as he put it 'a perfect knowledge of herbs and plants; so that if the [great Dutch anatomist and botanist, the] learned Pauw, could rise from the dead, he would be amazed to find that these [so-called] barbarians could instruct him'. 'I often marvel at the carelessness of our people, who without respect call these people barbarians', he reiterated, although 'not only in their knowledge of herbs but in all aspects of their economic system [they] leave our own far behind'.<sup>11</sup> Or again, 'Every Malayan woman practices medicine and midwifery so well that--I confess that it is the case--I would prefer to submit myself to such hands than to a half-taught doctor or arrogant surgeon, whose shadow of an education was acquired in schools, being inflated with presumption while having no real experience'.<sup>12</sup> So wrote one of the best educated European physicians to work in the East Indies during the 17th century.

By today's standards, the information conveyed by Bontius was only partial: European investigators like himself were not, for instance, interested in getting a picture of how local people explained how the medicines worked, they were only interested in their uses. In commenting on Indian verbena, for instance, he remarked that 'the old native women believe it to be a holy herb', being as superstitious as the old women back in the Netherlands; but he mentions this only to 'demonstrate the foolish habit' of mind that considers such things to be true, for 'I am not inclined to believe the supernatural forces of medicines', which had natural powers.<sup>13</sup> In other words, he privileged certain kinds of knowledge: that having to do with things and the material uses of those things. Foreign nouns, adjectives and verbs that were concrete--the simple things that came from the five senses, not the mind's eye--were readily transferable; abstract concepts he ignored, misunderstood, or dismissed. He therefore transformed the knowledge he acquired into 'objective' statements. He (re)produced knowledge, accumulated it, and handed it on, just like the merchants who governed the VOC. The medical practices of various Asian peoples therefore arrived in Europe stripped of context, while material knowledge about them was added to an eclectic and empirical medical system that just cared about whether they 'worked'.

Perhaps the best-known example of Dutch adaptation of Asian practices is that of Cornelis Bontekoe, today best known simply by his epithet, the 'tea doctor.' Bontius had earlier observed the practice of drinking a particular infusion of leaves from a plant called 'the' by the Chinese in Batavia, although he could get no information from them about the plant, which they kept secret. He testified, however, that it was a good drink for preserving health, and good for freeing the chest from thick phlegm, as well as being an excellent diuretic, especially useful in treating bladder and kidney stones. In succeeding years, more information became available about the source of tea, and testimonies about its healthful effects kept

coming in. Bontekoe added his voice in 1678, not many years after the Dutch East India Company began importing the substance in large quantities, when he published his Tractat van het excellensie kruyd thee, explaining that he had been cured of gravel in his bladder by drinking plentiful infusions of the herb. He therefore recommended both preventive and curative tea-drinking for anyone and everyone: 8 to 10 cups a day at a minimum, with 50 to 200 to be taken when necessary. (In advocating tea drinking in the quantity he did, he also recognized, of course, that he was taking on the beer and wine industries and the state tax-collectors.)

Like other physicians of his generation, Bontekoe argued that blood needed to be cleansed of the high acids and thick salts that clogged up the veins and arteries and caused over-heating. The acids and salts tended to be produced from ingesting the wine, beer, milk, whey, and butter-milk that almost everyone drank to rid themselves of thirst. Tea, however, possessed a subtle oil and a volatile salt--that is, an alkali--which worked to counter acid in the blood, at the same time tempering it and causing the salts to be evacuated through the pores and bladder. Bontekoe's teacher, François dela Boë Sylvius, was the first to develop a theory of acids and alkalis, which could--he believed--explain almost all diseases and suggest their remedies. The acid-alkali theory itself was clearly connected to a major economic enterprise: the cloth industry, the main industry of the city of Leiden, in which Sylvius's medical faculty was located. The cloth industry involved not only spinning and weaving, but dyeing and bleaching. Europeans paid close attention to new dyes when they travelled the world. Cochineal, for instance, began to be imported from New Spain as early as 1518 for use in dyeing. (Cochineal later was investigated by one of Sylvius's pupils, Jan Swammerdam, and found to be a tiny insect.) Cornelis Drebbel, the famous Dutch inventor who

spent much of his life at the English royal court, discovered about 1630 how to combine cochineal with tin to obtain a bright scarlet color in wool.

Dyes were also of great interest to the European naturalists: the first book brought out by the Royal Society of London, in 1662, was titled An apparatus to the history of the commone practices of dyeing, while a large part of Thomas Sprat's puff for the organization also concerned itself with the Society's work on investigating dyeing; in France, Colbert spent much energy and money on promoting the art of dyeing, and set many chemists to work on it. In northern Europe, the Dutch did most of the industrial dyeing of cloth. As it happens, too, the notion that aqueous substances are either acid or alkaline emerged during the 1660s from new color tests associated with the dyeing industry. In 1631, just a year after Drebbel introduced his new method for making scarlet cloth, Edward Jorden, in his Discourse on Naturall Bathes, and Mineral Waters, mentioned using Drebbel's scarlet cloth to distinguish waters according to whether they turned the cloth red or blue. When Robert Boyle wrote about some of the new color tests in his 1664 Experiments and Considerations Touching Colours, he acknowledged the dyers as one of the major sources of his information. Returning to Bontekoe, he used color indicators when he says, for example, that tea "is an almost pure alkali volatile"<sup>14</sup> because it becomes black as ink in the presence of vitriol, as do all alkalis--another color change used by the dyers. In other words, Bontekoe's theory about the effects of tea used color indicators emerging from the dye crafts to show its alkaline properties. Dyeing and bleaching were mainstays of industry in the neighborhood of Leiden. It therefore seems no accident that the acid and alkali theory was developed in its strongest form by a professor of Leiden in the 1660s, and used by one of his students to explain the beneficial effects of a new import from Asia.

The factual natural history that lay at the core of these investigations was built up by people of various faiths and backgrounds, incrementally, based on the production, accumulation, distribution and reinscription of knowledge of nature's details. It is a view not far from the recently deceased Robert K. Merton's classic Science, technology and society in seventeenth century England, but without the distraction of Weber. The growth of descriptive science was urged on by a conjuncture of many forces, but not least among them was the new global economy. We are speaking of a system in which exchange is as important as production. A raft of recent work on material culture--like that of Arjun Appadurai, Marshall Sahlins, Jonathan Parry, Nicholas Thomas, Janet Hoskins, and Maurice Godelier--has started from the argument advanced by Marcel Mauss about gift exchanges and moved far into analyses of the meanings associated with material things in various contexts. At the same time, economic and social historians like Craig Muldrew have opened new vistas by probing what he calls the 'culture of credit' and other bonds of mutual expectation that underpinned social and economic activity. The point is something that Roy Porter also drove home: that the changing desires of consumers--variations on what we call 'taste'-- are as important as the producers in any exchange relationship. I would only add that the values of the people making certain kinds of exchange possible also need to be considered. In early modern Europe, at least, they laid enormous importance on the particulars, not arguments about theory. Concepts followed. It is what might be called Baconianism avant la lettre. Let's oversimplify, then, and say that the kind of knowledge of nature being promoted by Bontius, Sylvius, Bontekoe and countless other intellectuals throughout Europe, like factors engaged in trade, was inductivism.

What huge consequences, though! This is a kind of knowledge that can calculate, that can identify true and false, that can make knowledge useful,

including finding new medicines to cure particular problems. But it does not pretend to be able to answer questions about good or bad. It therefore claims only partial knowledge. If one tries to find an evidentiary basis for truths concerning the good, all one can say, with Hobbes, is that good is what tends toward pleasurable sensations, and bad as what tends to painful ones. Knowledge of the material world as judged by material consequences--what a century later Kant described as a knowledge of the 'is'. But it is forever divided from a knowledge of the 'ought,' the moral, what was once called wisdom. A knowledge of nature that began with careful description of material things, and then debated about how they worked and how they might be turned to human benefit: that kind of reasoning could not penetrate to the moral causes of things. Since there was no assured path to personal wisdom, it could not give assurance that controlling the passions made one better--or even that being 'good,' in the sense of being virtuous, was what people should be striving for.

There were, however, other goods that seemed critical; material goods, to be sure, but also social goods. Here's how it was put in one of the most interesting political treatises of the Dutch Republic, Pieter de la Court's 1662 The Interest of Holland: Amsterdam was a richer city, and Holland a richer country, than had ever been seen before in the world. Why? There were few landed assets, no noble ores, not much but peat and cows. Listing the usual kind of resources that brought wealth seemed pointless. His answer therefore instead addressed a unique quality possessed by netherlanders, he thought: freedom--freedom of conscience and freedom to work without the constraints of guilds or monopoly companies: in other words, freedom for people to follow their own passions and interests. Freedom to pursue what tended toward pleasure created material goods. 'People must understand that a good government is not where the subjects fare well or badly depending on the virtue or vice of the governors', he argued. It was the opposite:

good government is ‘where the fate of the governors necessarily depends on whether the governed fare well or badly’.<sup>15</sup> If set in a well-regulated legal environment, the various passions present in individual people would check one another--competition would create sometimes bitter struggle, yet with social stability. Persons got hurt. But material improvement occurred rapidly. It was only a small step from these Dutch thinkers to Hume, Adam Smith, and others of the Scottish Enlightenment a century later.

The power of this line of argument about the sources of the good life, coupled with the rich luxuries on display throughout the Netherlands, could set one’s head spinning. One of those bright sparks who saw the implications was Descartes, whose views began to change during his long period living in the Dutch Republic beginning in the 1620s. He carefully considered the new anatomical evidence being piled up by naturalists like his mentor, Sylvius--he of the acids and alkalis--and put together a treatise showing how everything about the human body and behavior could be explained in materialistic terms, even down to the central role of the pineal gland. Descartes’ first major public defenders were physicians in the Netherlands, and perhaps his most revealing comments about what he thought he was up to come from notes taken down by a medical student, Burman, who went to consult him. By that time, the middle of the 1640s, he had come to a conclusion that surprised his friends, and which might even have surprised him: the passions were all good.

He arrived at this conclusion after starting to give medical advice to his close friend, the young Princess Elisabeth, daughter of the Winter King, niece of the King of England, and brother of Prince Rupert. Every day, further news came of disasters for her family from Central Europe, where The 30 Years war was ravaging the lands, and from the English civil wars, where her gallant brother lost battles and her uncle Charles I was heading for the chop. In growing despair she

went off to Spa to take the waters. Descartes gave her the usual advice: the passions of her mind were running away with her, causing her illness. I say the usual advice because classical teaching instructed that for the sake of both health and virtue, reason should control the passions. Robert Burton typically sighed about this in his 1621 Anatomy of Melancholy: ‘All Philosophers impute the miseries of the body to the soul, that should have governed it better by command of reason, and hath not done it’.<sup>16</sup> The true physician, like the true philosopher, exercised his own right reason in teaching those who consulted him how to live according to the dictates of reason. As I have argued elsewhere, this was the main argument used by the learned physicians when they explained why other practitioners should be disciplined: they did not have the proper inner wisdom. Descartes was therefore doing the usual thing in advising his dear young friend to get a grip. He recommended they read Seneca.

Elisabeth, however, keep pressing him, and did so on the point we all want to know: OK, you've written a book I read carefully about the difference between mind and body; now, how do you propose they interact? Good question, he answered--but don't bother your head about it. Just live as if mind and body do interact. When we just live, we know they are one, not two. But she persisted; he took her concerns seriously; he started writing a book on the passions, which was published in November 1649, just three months before his death in Stockholm. In its conclusion, he dropped a bombshell still not taken on board in most undergraduate lectures on Cartesianism: ‘We see that [the passions] are all by nature good’. He still thought that a select few noble souls might be able to control them and so achieve tranquillity of mind and the long life it would bring, but even if you could not control the passions, one could accept them as the sources of our inner nature. People who can be moved deeply by the passions ‘are capable of enjoying the sweetest pleasures of this life’, he wrote. Even more, all the pleasures

that are common to both soul and body, such as love, ‘depend entirely on the passions’.<sup>17</sup>

Health and happiness flowing from the passions rather than from exercising reason to check them--this was an intellectual revolution--and no wonder the clerics everywhere objected! The first and in some ways most profound dispute about Cartesianism was provoked when Descartes’ friend, a medical professor in Utrecht, Regius, supported a student defending a thesis that made the body out to be a materialistic entity and nothing more, citing Descartes as a source; the leader of the Calvinist church, Voetius, responded by stirring up a cascade of indictments. It must be acknowledged that a fully-fledged materialist position on the human condition was a minority view. But stimulated by a sense of rapidly accumulating material prosperity based on control of the global spice trade, and the sense that these benefits came from setting the passions free, coupled with philosophical arguments such as those of Descartes, the Dutch Republic saw a brief efflorescence of materialist theories that emphasised that the passions were natural and therefore good springs of human behavior. Among them was Baruch Spinoza’s Ethics of 1677, which treats the passions as expressions of nature just as much as mind and body--indeed they were just attributes of a single moving unity, in each of us and in the world as a whole.

In other words, there were, and are, ways in which whatever happens can be seen as completely ‘natural’, beyond human reasoned agency--even the passion for trying to understand the world. In places like England and the Netherlands, such views certainly circulated among the coffee-houses and clubs but not usually in public: indeed, in later 17th-century England, there were many attempts by the royal government to suppress the coffee-houses not only because this other new drink from the east seemed to foster political conversation, but also because they seemed hives of atheism. In places like France, educated salon conversation about

the materialist views of La Mettre, D'Holbach, Diderot, Lamarck and others helped to undermine the authority of church and king. Philosophical materialism was quietly implied if not explicitly taught in the medical schools such as Leiden's and Edinburgh's, and in the multiple medical courses in London. It is said to be an ancient saying: wherever you find five doctors together, three will be atheists. 'Singular, communed the guest with himself', looking around at a group of medical students, 'the wonderfully unequal faculty of metempsychosis possessed by them, that the puerperal dormitory and the dissecting theatre should be the seminaries of such frivolity'--it still bothered James Joyce in 1922.<sup>18</sup>

Globalisation, commercial and philosophical materialism, belief in the progress of wealth and society, even democracy linked to such a world: all this can be found in the open three and one-half centuries ago. So were views about how body and mind was rooted in the unknowable inner springs of nature (called the passions). Many also shared the sense articulated by Whitehead so long after, that the feelings emergent from authentic experience still indicate something else beyond our rational comprehension, something often articulated as a sense of the ineffable that lies beneath the surface, which could only come from a devotion to encountering the ways things are without presuppositions. But if this was a faith, it was not a religious doctrine--and the clerics knew it.

Remember Bontius, who was speaking to local informants to acquire a knowledge of the natural history and medicine of Asia? About a decade before Descartes began to reconsider his views on the passions, Bontius wrote a dialogue about how to live healthfully in the tropics, in which he says this: 'Much have physicians written on [the passions] and the method of moderating them: but ... the passions of the mind are scarcely within our controul. ... Who but will acknowledge that what is easy for one, may be difficult to a person of another temperament?' 'Wherefore', he concluded, 'to lay down any precise rules

concerning the passions of the mind, would favour more of a trifler than a philosopher'.<sup>19</sup> This reminds him and his interlocutor of breakfast, and concludes the dialogue.

You will now be reminded of the forthcoming reception, and I don't want to delay you much longer. Let me just point out one of the implications of all this for medicine. Bontius and doctors like him were turning their backs on the project of trying to make people virtuous in order to make them healthy. Of course various behaviours could make someone ill: Bontius was especially scathing of the drunken sailors who passed out beside the road late at night when on shore leave, sleeping uncovered in the falling damp and from this contracting acute, life-threatening fevers. But Bontius and his fellows were not concerned with teaching them how to follow right reason so that they could live in health and harmony with the One, as classical medicine would have instructed. No, his approach was more materialistic, searching for physical causes and effects. His goal was not to make any moral judgments about what stood before him, only physical ones. Above all, in the Hippocratic tradition, he refused to speculate about the underlying order of things while instead focusing his efforts on giving exacting physical descriptions of anatomy, disease symptoms, animals and plants, hoping to find a remedy for every ill. What presented itself to the doctor was a kaleidoscope of ever-changing patterns, all made up of the same basic units, those simple matters of fact in a variety of combinations. We might say that we have in people like Bontius and Bontekoe the embodiment of a kind of physician who was not a philosopher but a clinician.

Let me close, then, by quoting from one of the best English examples of this new sort of doctor, the man called the 'English Hippocrates', someone much admired in the Netherlands, and one of the most influential mentors of John Locke: Thomas Sydenham. The Whig poet and physician Sir Richard Blackmore

recounted an encounter with Sydenham this way--it must have impressed him because he included the account in his own works on two occasions: ‘when one day I asked him to advise me what Books I should read to qualify me for practice, he replied, “Read Don Quixote, it is a very good Book, I read it still.”’ That is, Sydenham was telling Blackmore that the first step on the path to wisdom was recognizing that most of what we think about the world is a figment of own imaginations; he preferred those hard matters of fact that privately seemed to reveal something powerful and meaningful. Sydenham himself put it this way in a letter to William Gould: ‘I can only say this, that as I have bin very careful to write nothing but what was the product of faithful observation, so when the scandal of my person shall be layd aside and I [am] in my grave, it will appear that I neither suffered my selfe to be deceived by indulging in idle speculations nor have deceived others by obtruding any thing upon them but downright matter of fact’.<sup>20</sup> I think Jeremy Bentham would have approved.

#### Notes

<sup>1</sup>. Alfred North Whitehead, *Science and the Modern World*, 1<sup>st</sup> pub. 1925 (New York: Free Press, 1967), 8, 18.

<sup>2</sup>. Desiderius Erasmus, *The Praise of Folly*, translated by Hoyt Hopewell Hudson, 1<sup>st</sup> pub. 1941 (Princeton: Princeton University Press, 1974), 43.

<sup>3</sup>. Francis Bacon, *Thoughts on Natural Things*, in *Works* 10:296-97 (quoted in Catherine Wilson, *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* [Princeton: Princeton University Press, 1995], 52).

<sup>4</sup>. Thomas Hobbes, *Humane Nature*, 3d ed. (London: Printed for Matthew Gilliflower, Henry Rogers, and Tho. Fox, 1684), 30.

<sup>5</sup>. Michele de Montaigne, *The Complete Works of Montaigne*, translated by Donald M. Frame, 1<sup>st</sup> pub. 1943 (Stanford: Stanford University Press, 1989), 856.

<sup>6</sup>. William Law, *Remarks Upon a Late Book, Entituled, The Fable of the Bees* (London: Printed for Will. and John Innys, 1724), 2, 4.

<sup>7</sup>. Niels Steensgaard, *The Asian Trade Revolution of the Seventeenth Century: The East India Companies and the Decline of the Caravan Trade* (Chicago: University of Chicago Press, 1974), 43.

<sup>8</sup>. Barbara J. Shapiro, *Probability and Certainty in Seventeenth-Century England* (Princeton: Princeton University Press, 1983), 9.

<sup>9</sup>. Robert Boyle, *Usefulness of Experimental Naturall Philosophy* (Oxford: Printed by Hen. Hall for Rich. Davis, 1663), 220–21.

<sup>10</sup>. Jacobus Bontius, *Tropische Geneeskunde / On Tropical Medicine*, in *Opuscula Selecta Neerlandicorum De Arte Medica* (Amstelodami: Sumptibus Societatis, 1931), X:8–29.

<sup>11</sup>. *Ibid.*, 92-95, 24-25, 366-7.

<sup>12</sup>. *Ibid.*, 396-397.

<sup>13</sup>. *Ibid.*, 396-97.

<sup>14</sup>. *Opuscula Selecta Neerlandicorum De Arte Medica* (Amstelodami: Sumptibus Societatis, 1907–48), XIV: 449.

<sup>15</sup>. Pieter Cornelis de la Court, *Interest Van Holland, Ofte Gronden Van Hollands-Welvaren; Aangewezen Door V. D. H.* (Amsterdam, 1662), preface.

<sup>16</sup>. Burton, *Anatomy of Melancholy*, Part I, Sect. I, Memb. I, Subs. I; and Part X, Memb. X, Subs. X.

<sup>17</sup>. Printed in René Descartes, *The Philosophical Writings of Descartes*, ed. and trans. John Cottingham, Robert Stoothoff, Dugald Murdoch, and Anthony Kenny (Cambridge: Cambridge University Press, 1985-91), I:349, 403, 404.

<sup>18</sup>. Joyce, *Ulysses*.

<sup>19</sup>. Bontius, op cit., p. 99.

<sup>20</sup>. The quotations from Sydenham are most accessible in G.G. Meynell, *Materials for a Biography of Dr. Thomas Sydenham* (Folkestone: Winterdown Books, 1988).