From medical astrology to medical astronomy: sol-lunar and planetary theories of disease in British medicine, c. 1700–1850

MARK HARRISON*

Abstract. After 1700, astrology lost the respect it once commanded in medical circles. But the belief that the heavens influenced bodily health persisted – even in learned medicine – until well into the nineteenth century. The continuing vitality of these ideas owed much to the new empirical and mechanical outlook of their proponents. Taking their cue from the work of Robert Boyle and Richard Mead, a number of British practitioners amassed statistical evidence which purported to prove the influence of the Moon upon fevers and other diseases. Such ideas flourished in the colonies and in the medical services of the armed forces, but their exponents were not marginal men. Some, like James Lind, were widely respected and drew support for their views from such influential figures as Erasmus Darwin.

It is generally assumed that astrology and, consequently, medical astrology began to lose credibility in English intellectual circles towards the end of the seventeenth century, flourishing thereafter only as popular superstition. Notwithstanding Richard Mead’s account Of the Power and Influence of the Sun and Moon on Humane Bodies (1708), it is maintained that medical astrology was abandoned by those in the medical profession who saw themselves as its intellectual leaders. Michael MacDonald, for example, has ascribed the decline of medical astrology in England to a ‘diffuse bias towards empiricism’ in the period immediately after the Restoration and to the depiction of astrology as a spurious ‘conjectural science’. With the notable exception of Mead – one of the most distinguished physicians of his day – MacDonald claims that medical astrologers were regarded as crackpots who brought their profession into disrepute. Although other scholars have acknowledged the continuing institutional and commercial strength of astrology in England, few have challenged or even qualified the orthodox account of its decline. So far,
only Bernard Capp has been prepared to admit that there may have been, in intellectual
circles, a ‘lingering belief that the pseudo-science contained an element of truth’.4

In what follows, I shall argue that many of the ideas constitutive of astrological
medicine persisted well into the nineteenth century, not just among ‘fringe’ practitioners
but among men who considered themselves (and were considered by others) to be in the
van of medical progress. I am not arguing, however, that astrological medicine remained
in the ‘mainstream’ of British medicine; in part, because the diversity of medical doctrine
taught and practised across Britain defies such a task; but also because I acknowledge that
astrological medicine was seldom given serious attention in such august institutions as
Edinburgh University or the Royal Colleges. Rather, some of the ideas which had formerly
underpinned astrological medicine flourished in the innovative environment of the military
and naval medical services, where overseas service and contact with other medical
traditions stimulated a reappraisal of European medicine. Although some of these
practitioners were socially and professionally marginal, their number included many
practitioners of renown. The naval surgeon James Lind (famous for his writings on scurvy
and the medicine of warm climates), for example, and James Johnson (one of British
India’s foremost medical practitioners and writers) were well respected in Britain and
reached the pinnacle of their profession. Although their commitment to a certain form of
astrological medicine – when recognized – has usually been written off as an aberration,
quite separate from those parts of their work which are regarded as scientifically valid,5 it
was, in fact, an intrinsic part of their world-view. It was of a piece with their commitment
to a thoroughly ‘environmental’ conception of diseases, by which they stressed to a much
greater extent than most metropolitan practitioners the effects of climate on human bodies.
For this reason the physician Erasmus Darwin was to find much in the writings of military
and naval physicians that he could relate to his own environmentalist medical and
evolutionary theories.

Before examining the career of astrological medicine in more detail, it is necessary to say
a few words about terminology. Only a few of the medical practitioners mentioned below
referred to themselves as ‘medical astrologers’ or saw themselves as practising ‘astrological
medicine’. Nevertheless, while dispensing with horoscopes and the zodiacal imagery
typical of medical astrology in the sixteenth and seventeenth centuries, their basic
assumptions about the influence of planetary and celestial phenomena on human health
remained the same. All that had changed were their explanations of how these phenomena
affected the human body. Rather than attribute ill health to some vague, supernatural
‘influence’, they began to construe the relationship between the human body and the
heavens in mechanical terms. Some pictured the human body as surrounded by invisible
particles emanating from the Sun and other celestial bodies, while others – the vast
majority – drew analogies between the effects of the Sun and Moon upon the tides, and
their presumed effects upon fluids within the body. The theoretical basis for such views was
often derived from Newton’s theory of gravitation, which was simplified and rendered

4 Bernard Capp, Astrology and the Popular Press: English Almanacs, 1500–1800, London, 1979, 278; see also
207–8.
accessible to the medical profession in such works as Mead’s *Of the Power and Influence of the Sun and Moon on Humane Bodies*.

It might, therefore, be argued that the sol-lunar theories of disease advanced in the eighteenth century marked a break with the past—a shift from ‘medical astrology’ to ‘medical astronomy’, perhaps. But while this typology captures important shifts in vocabulary and explanation, it masks strong continuities with the past. These continuities exist not only at the level of basic concepts (the notion that the heavens influenced bodily health) but in the fact that seventeenth-century medical astrologers had already begun to ‘reform’ their practices and to explain celestial influences in the idiom of natural philosophy. Thus astrologers often speculated that the stars and planets worked their influence through some ‘unknown magnetism’ or ‘balsamic atoms’.\(^6\) Seventeenth-century astrologers such as John Gadbury also attempted to verify their work empirically; for instance by correlating planetary movements with meteorological conditions, which, in turn, were thought to have a bearing on health.\(^7\) This empirical, statistical trend intensified during the eighteenth century, and is evident in the work of the sol-lunar theorists of disease.

**Mechanical philosophy and medical astrology**

It is generally assumed that medical astrology lost much of its credibility because it was incompatible with empirical and mechanical trends in seventeenth-century natural philosophy, but some of the greatest exponents of the ‘new science’ continued to find a place for astrology in their writings on natural philosophy. This is clear from the work of Robert Boyle (1627–91), who is said to typify a peculiarly English, eirenic tendency within natural philosophy, which relied upon experiment to determine matters of fact and which avoided contentious speculation.\(^8\) It would therefore seem unlikely that Boyle would retain any respect for what was increasingly regarded as a vague conjectural science. But, though Boyle was circumspect when explaining his experimental results, much of his writing is still conjectural. His *General History of the Air* (1692), for instance, is a largely speculative treatise on the composition of the air and the ways in which it is affected by heat, cold, moisture and so forth. With typical caution, Boyle suggested that ‘it is not improbable’ that the air consists of three kinds of ‘corpuscles’: atmospheric (vapours arising from terrestrial exhalations); ‘subtle’ or ‘magnetical’; and elastical.\(^9\) The latter were fundamental to Boyle’s work on the compressibility or pressure of the air, but it is the second—the ‘subtle’ and ‘magnetical’—which demonstrate his commitment to a form of astrology compatible with mechanical principles. These particles, according to Boyle, were those that made up

---

\(^6\) Capp, op. cit. (4).

\(^7\) Capp, op. cit. (4), 185.


the Magenetical Streams of our Terrestrial Globe, and the innumerable Particles, that the Sun and other Stars ... do either emit out of their own Bodies, or by their Pressure thrust against our Eyes, and thereby produce what we call Light; which, whether we explicate it by the Epicurean or Cartesian Hypothesis, argues a great Plenty of a Celestial, or some other very subtile Matter, to be dispersed through, or harboured in the Intervals of the stabler or grosser Corpuscles of the Atmosphere.10

The presumed existence of celestial matter within gross matter provided the basis for Boyle’s belief that the Sun and other heavenly bodies could exert an influence over terrestrial affairs. Whether this was to be explained in terms of the concatenation of particles or some more diffuse magnetic influence (akin to William Gilbert’s earlier magnetic cosmology11) is a matter he left open. Boyle does, however, elaborate later in his History of the Air on the ways in which such influences might have a bearing upon the constitution of the air and its effects on health. But, in the face of increasing criticism of astrology in post-Restoration England, he first felt it necessary to defend his basic convictions and to distance himself from the crass and irreligious elements in popular astrology. Boyle claimed that the fallibility of astrological predictions, and their lack of a generally recognized ‘scientific’ rationale, did not ‘really null or take away the Possibility of the thing put simply, but are raised rather against the Enormities and Imperfections that are confessed to be in it’.12 But if the wilder claims of astrologers were to be rejected, the evidence for some kind of celestial influence on terrestrial phenomena could be proved, according to Boyle,

1st. by undeniable Experiments, not only from things inanimate and vegetate, but from the Undoubted Observations of Physicians, as well as in several Chronical as Acute Distempers, and more eminently in all Lunatick, Epileptic, Paralytic or Lethargick Persons. 2dly. It may further admit of a Demonstration: for if the extream Motions of Physick be Generation and Corruption, and the mean Motions Rarefaction and Condensation, allowing then these Bodies to have a share in promoting the mean Motions, (viz.) of Rarefaction and Condensation, we shall or may soon be convinced, that their Effects then upon all other things here, cannot be exceeding considerable.13

Further proof – persuasive, if not incontrovertible – came to Boyle from the accounts of medical practitioners who had encountered other cultures in which celestial influences upon human health were freely admitted. ‘They have a tradition in Java’, wrote Boyle, that the Beams of the Moon are wont to cause Contractures in the Body of those Men that stay too long exposed to them: The Truth of which tradition was lately confirmed to me by an ingenious Doctor, that with Applause practised Physick in those Parts; who assured me that he had observed, that ... some were made lame, or else had some of their Limbs contracted for divers Weeks, and some for many Months, or even a longer time.14

Boyle was, therefore, prepared to admit the testimonies of gentlemen whom he considered reliable (the identity of this doctor is, unfortunately, unknown) as sufficient evidence for celestial influence upon the body. As Shapin has pointed out, this was very

10 Boyle, op. cit. (9), 4.
12 Boyle, op. cit. (9), 69.
13 Boyle, op. cit. (9), 70.
14 Boyle, op. cit. (9), 76.
much in keeping with the standards of proof to which Boyle and the majority of English experimental philosophers adhered: gentility was synonymous with veracity.\textsuperscript{15} However, Boyle felt that the test of what he termed his ‘Apology for Astrology’ would rest ultimately on the observations of other natural philosophers, whom, he hoped, would ‘take Pains to calculate these [celestial] Motions for his own private Use, and according to the Meridian he is in, so compare them with his own Observations, of the Change and Alteration of the Air from Day to Day’.\textsuperscript{16} Boyle himself was acutely conscious of the relationship between his own constitution and that of the air, and was famously governed by his thermometer in the conduct of his daily affairs.\textsuperscript{17}

While Boyle’s corpuscular theory may have provided medical practitioners with a plausible account of the affinities between celestial and terrestrial matter, he remained uncertain as to how, exactly, celestial bodies might exert their influence upon the human frame. It is not clear whether he envisaged a collision of particles or some vague magnetic influence. Newton’s theory of gravitation, however, supplied such a theory. His work on tides, in particular, enabled medical practitioners to make a reasoned analogy between the action of the Sun and Moon over the waters of the Earth and their presumed action upon the fluids of the human body.\textsuperscript{18} Such analogies were not new, but in Newton’s work the relationship between the Sun, the Moon and the sea was calculated with mathematical rigour. It was this aspect of Newton’s \textit{Principia Mathematica} (1687) which most impressed Richard Mead (1673–1754), Physician in Ordinary to St Thomas’s Hospital, Southwark and, like Newton, a Fellow of the Royal Society. Mead was one of a number of elite practitioners who embraced wholeheartedly the ‘mechanistic’ natural philosophy of Newton and he referred to the human body as an ‘animal Machine’. He had been taught at the University of Leiden by the leading figure of the ‘iatromechanical’ school, Archibald Pitcairn (1652–1713), and was an acquaintance of another leading iatromechanist, Herman Boerhaave, a student contemporary at Leiden.\textsuperscript{19}

Mead was, however, unique among the practitioners of his day in publishing a treatise solely concerned with the effects of celestial bodies upon human health. This book, which was first published in Latin as \textit{De Imperio Solis ac Lunae} in 1708, was published in English in 1712 under the title \textit{Of the Power and Influence of the Sun and Moon on Humane Bodies}. Mead stated at the outset that his aim in writing the book was to incorporate physic into the new natural philosophy of Galileo, Kepler and Newton, for physic was, he felt, ‘still full of nothing but conjectures, and scarce deserves the Name of a Science’.\textsuperscript{20}

\begin{footnotes}
\item[16] Shapin, op. cit. (8), 76.
\item[17] Observation of Dr Birch, in ‘Robert Boyle (1627–1691)’, DNB.
\end{footnotes}
There were also professional advantages in claiming a more certain foundation for medical knowledge at a time when many had become disaffected with traditional Galenic medicine. But in order to convince a wider audience of the validity of Newtonian medicine, Mead was forced to present a highly simplified version of Newton’s theory of gravitation. Indeed, very few medical practitioners or natural philosophers yet fully understood the entirety of the Principia. Thus Mead expected his readers to be only ‘a little versed in what Mr. Newton has writ’, or at least to understand what others had written in Newtonian vein on the subject of the tides (he referred particularly to the work of Edmund Hall, another Fellow of the Royal Society). But, in case Newtonian medicine might appear too modish, Mead was quick to ground his mathematically based theories on ancient authority, on the writings of Hippocrates, Celsus, Democritus, and Pliny – all of whom welcomed the application of geometry to physic. Lastly, Mead appealed to a vast body of maritime and medical lore which linked meteorological conditions to phases of the Moon and to the passing of the seasons. It was well known, for example, that winds blew strongest at the vernal and autuminal equinoxes, and that they were most violent at noon and midnight, that is, when the Sun was at its zenith or its nadir. ‘The same likewise happens’, wrote Mead, ‘when the Tide of the Flood is at the Highest, when the Moon comes to our vertical Point, or to the directly opposite.’ This ‘constant and perpetual Order of Nature’ occurred because of the force of gravity, the pull of which on the upper atmosphere caused air to rush in to fill the vacuum that had been created below. The air, according to Mead, was a subtle fluid which behaved in much the same way as all fluid systems (including the human body), in that it tended towards equilibrium.

This air/water analogy is central to Mead’s argument, which was founded on ‘Newton’s doctrine of the Flowing and Ebbing of the Sea, accommodated to the air’; the aerial ‘fluid’ was said to respond to the pull of gravity in just the same way as water. The air, like the sea, was raised upwards by the attraction of the Moon in perigee (when it came closest to the Earth), or when the Moon came into the meridian on its diurnal cycle. The same phenomenon would occur, he reasoned, when the Sun reached meridian, either above or below the horizon; or at new and full moons. On occasion, the two bodies would ‘conspire in their attraction’, but their combined effects would be least on the ‘quarter days’, when they drew in different ways. The ‘fluxes’ of both elements, Mead believed, had been designed by the Creator to prevent them from becoming stagnant and corrupt, and therefore noxious to animal life. But these seasonal fluctuations were such that they could ‘change the Fabrick of the Animal Bodies’, and often in such a way as to be harmful. For example, Mead reasoned that when the Earth was closest to the Sun in its orbit, the Sun’s gravitational pull would increase, causing a decrease in air pressure and some difficulty in breathing. The lighter the air, according to Mead, the harder it was to breathe, since some

21 Brown, op. cit. (18).
22 Mead, op. cit. (20), pp. xx–xxi.
25 Mead, op. cit. (20), 4.
26 Mead, op. cit. (20), 10.
27 Mead, op. cit. (20), 7.
28 Mead, op. cit. (20), 16.
Medical astrology to medical astronomy

A weight was required to force the ‘spirable fluid’ into the body’s respiratory tract. The other stars and planets were also said to exert an influence on human health, though not equal to that of the Sun and the Moon. None the less, Mead thought they ‘conspired’ with the two luminaries to cause ‘most Distempers in all Countries’. The ancients, he noted, took special notice of the Dog Star, ‘whose rising is most regularly when the Air is the most heated by the Sun… So by necessary Consequence all Diseases that proceed from too much Heat, must needs be encreased; and harder to be cured, and those that have Fevers are then in greatest danger.’

After explaining the general principles of his theory, Mead went on to list a series of case studies, illustrating the effects of celestial influences on particular diseases. Those chosen by Mead tended to mirror ancient medical and folkloric beliefs, particularly that the Moon was responsible for episodes of epilepsy and lunacy. Epilepsy, or the ‘falling sickness’, was commonly associated with phases of the Moon, and it is significant that Mead cited with approbation the work of another Newtonian physician, Pitcairn, who gave an account of ‘several Women of his Acquaintance, who according to the Motion of the Moon, had Epileptical Symptoms, especially Women with Child; and those that sooner than ordinary had given over bearing of Children, and wanted their monthly Evacuations’. These ideas had an ancient lineage but the conventional wisdom about epilepsy was easily reconceptualized in mechanical terms, and the belief that women were particularly liable to lunar influences persisted in learned medicine until the nineteenth century. The correspondence between the lunar cycle and the menstrual cycle was later cited by Erasmus Darwin, for example, as being among the most persuasive evidence for a link between celestial phenomena and human health.

Yet men were also subject to the effects of the Moon. Mead recalled one case of a young man who had contracted a ‘Misfortune by meddling with an unsound Woman’, which had left him with a stinking ulcer on his glans. Although the ulcer seemed to heal, it returned every new Moon and continued to do so for several months until he had been cured. The Moon’s influence was also thought to accelerate the natural course of a fever, this being particularly so if the ‘critical days’ of the fever fell upon the new or full moons. This was, essentially, a Hippocratic idea, which retained a certain amount of popularity through Mead and other sol-lunar theorists until the nineteenth century. Mead also documented certain instances of lunar influence leading to deformities – a common theme in naval lore, but one which was also taken seriously by some of the most eminent medical authorities. He cited the observations of the anatomist Kerckringus (Theodor Kerckring, 1640–93), ‘a Man famous for Learning and Study’, who recounted the story of a French matron of his acquaintance who was apparently round-faced and beautiful at the full moon, but ‘at the Wane of the Moon, her eyes, Nose, and Face were turned on one Side; so that she

29 Mead, op. cit. (20), 23, 26.
30 Mead, op. cit. (20), 27.
31 Mead, op. cit. (20), 27–8.
33 Mead, op. cit. (20), 33.
34 Mead, op. cit. (20), 48.
35 Mead, op. cit. (20), 62.
would not go abroad, because of the great Deformity, till the Moon changed again’. ‘Let no man wonder at this’, Mead added, ‘since it is confirmed by what is commonly observed in shell-fish and many other Sorts of Animals.’

Again, the veracity of this story was taken on trust, resting on the reputation of the revered Kerckringus; the story was then corroborated by matching it with the received wisdom (probably derived from Aristotle or Pliny’s *Natural History*) that shellfish and some other creatures changed their appearance with the phases of the Moon. Clearly, at this stage, the absence of any systematic empirical data to support the lunar theory did not pose a barrier to its acceptance.

Mead, however, was not content with having established the role of celestial phenomena in the causation of disease, but sought to derive principles of treatment that harmonized with them. ‘I look upon it as granted’, he wrote,

that all Distempers whose Circulations correspond to the lunar Periods are caused by Repletions, for since the lunar Action causes this Effect by the Distention of the Vessels, it’s clear, that it only increases the Fulness or Plenitude, which whether we attribute it to the Weight and Bulk of the Fluids, or to their Turgescency comes all to one.

Thus, he reasoned, all complaints that manifested themselves once or twice a month – in which the influence of the Moon was deemed highly probable – evacuation would be the sovereign remedy, to lessen the quantity or thickness of bodily fluids. This might be effected through bloodletting or the ingestion of specific remedies.

**Sol-lunar theory in the tropics**

The conventional view of the fate of medical astrology is that Mead was the last medical practitioner of repute to publish a treatise on the subject; even Georgian quacks, it is claimed, downplayed astrology in their efforts to attract wealthy patients. This is true up to a point, but medical astrology of a Meadian variety did not entirely die out in eighteenth-century Britain. Rather, it became an important element in the medical culture of the military and naval services and, more generally, among those British-trained practitioners who lived or worked for a time in the tropics, particularly the East and West Indies. These practitioners cannot be dismissed as marginal or irrelevant to the development of British medicine. Many of the East and West Indian ‘Lunacists’, as they were later termed, were men of high standing in metropolitan as well as colonial circles, and some considered themselves to be at the cutting edge of medical theory and practice. Conscious that their views on the influence of celestial bodies placed them at odds with opinion in Britain, they nevertheless continued to insist that those views were true. Indeed, belief in sol-lunar and, to a lesser extent, planetary influences on health was central to their peculiarly environmentalist outlook. Their experience of new disease environments such as the Indies was fundamental to their beliefs, since medical practitioners often felt themselves helpless in the face of what were apparently new diseases, or more familiar ones

---

36 Mead, op. cit. (20), 51–2.
37 Mead, op. cit. (20), 66–7.
38 MacDonald, op. cit. (1), 80.
which seemed to increase in intensity between the tropics. Seemingly at the mercy of a
hostile environment, tropical practitioners came to stress to a greater degree than their
colleagues at home the role of climatic and meteorological factors in the production of
disease. Though by no means fatalistic, European practitioners in the tropics came to feel
that their destiny was shaped by environmental factors which were largely beyond their
control. A revitalized ‘astrological’ medicine may therefore have provided them with a
framework in which to understand, or even to predict, the behaviour of the climatic
phenomena which seemed to govern health in the tropics.

This conviction was underscored by the belief that the Sun and the Moon exerted far
more power over nature between the tropics than in temperate zones. Benjamin Moseley
(1742–1819), who worked as physician at several British military hospitals in the West
Indies during the 1770s, maintained that ‘between the tropics, and in all hot climates, the
Moon has a more corruptive power, than in northern latitudes. Meat and fish, there putrefy
in a few hours at all times; and almost immediately, when exposed to the Moon. Sailors
know this and take precautions accordingly’.40 The reason for this, he explained, was
simply that ‘the relaxation and debility of the nervous system in tropical climates’ meant
that the human frame was less able to resist the affects of the luminaries.41 It was
commonly believed by medical men in both the East and the West Indies that heat relaxed
the fibres of the body.42

Moseley, a member of the Royal College of Physicians of London, and future Physician
to the Chelsea Hospital, maintained these convictions long after he had returned from the
Caribbean to a distinguished, if somewhat unorthodox, career in Britain. Indeed, his
conviction seemed only to strengthen with age and experience. To the fourth edition of his
*Treatise on Tropical Diseases* (first published in 1787), Moseley added a large section ‘On
the influence of the Moon’, in which he claimed to have moved significantly beyond the
observations of the ancients, and even beyond those of Mead. Mead’s work was dismissed
as a ‘mere compilation’ which added nothing new to knowledge of the effects of the Moon
on human health. It was also far too mechanical and theoretical for an empirically minded
physician like Moseley. ‘Mead’s can scarcely be deemed a medical work’, he claimed, ‘He
was more intent on proving mathematically how the Moon acted, than on furnishing cases;
and square them to Newtonian doctrines.’43

Moseley’s own work, however, had the benefit, as he saw it, of over thirty years of
observation both in the West Indies and in Britain. These observations had convinced him,
for example, that the Moon had a profound effect upon fevers. ‘In 1780’, he recalled, ‘all
the soldiers in the military hospitals in Jamaica, under my care, in dysenteries and
intermittents, almost certainly relapsed at the lunar syzygies.’44 He had also observed many
cases at the Chelsea Hospital in which apoplexy and palsy coincided with the full of the

40 Benjamin Moseley, *A Treatise on Tropical Diseases; on Military Operations; and on the Climate of the
41 Benjamin Moseley, *A Treatise on Tropical Diseases; on Military Operations; and on the Climate of the
West Indies*, 3rd edn., London, 1792, 64.
42 See Harrison, op. cit. (39).
43 Moseley, op. cit. (40), 597.
44 Moseley, op. cit. (40), 610.
In addition to his own observations, Moseley cited countless ancient and modern authorities who concurred with his theories; authors as diverse as Aristotle, the French surgeon Ambrose Paré, and that icon of British empiricism, Francis Bacon. Moseley’s friend, Sir Richard Worseley, had also encountered many cases which seemed to affirm the theory of lunar influence during his travels in the Levant, where he had been collecting exhibits for his museum. Moseley claimed that Worseley had encountered many Levantines whose afflictions of the skin and eye fluctuated according to the waxing and waning of the Moon.

One significant difference between the writings of Mead and Moseley was the latter’s insistence on the peculiarities of individual constitutions, in respect of their liability to lunar influence. ‘Peoples with weak fibres and much irritability of system’, he insisted, ‘feel every alteration in the atmosphere, and are affected by the rays of the full Moon; – for one of her attributes like conceit, “in weakest bodies, strongest works”’. Such people, according to Mead, included the aged, the nervous and hysterical, people of weak stamina and ‘vertiginous heads’ and those of ‘sensitive spirits and animated dispositions’. Mead also lamented that mankind had lost its earlier reverence for the Moon; a reverence which was still to be found in many traditional societies:

> When we reflect on these things, we can scarcely believe that the present Moon is the same which shone in the days of old. – It is true her aid is sought in navigation; otherwise, she now wanders round the earth for little more than the amusement of juvenile astronomers.

While Moseley’s tendency to wax lyrical about the Moon might have appealed to those of a Romantic disposition, it did not always endear him to his contemporaries, or even to other sol-lunar theorists. As we shall see, some later writers took great pains to distance their own version of sol-lunar theory from the ‘absurdities’ to be found in A Treatise on Tropical Diseases.

Most eighteenth-century writers on the influence of the Moon did, however, agree with Moseley that the Moon and other luminaries exerted a far more powerful influence in tropical regions than elsewhere. Indeed, the distinctive features of tropical disease environments led colonial surgeons and physicians to abandon or substantially modify their practices, often in line with the medicine practised by peoples indigenous to the tropics. Thus, in the West Indies and the Americas, British practitioners incorporated some of the medical practices of native Americans and African slaves; in the East Indies, a similar process occurred, and indigenous practitioners were employed in considerable numbers on the staff of the East India Company, where they assisted European surgeons.

---

45 Moseley, op. cit. (40), 615.
46 Moseley, op. cit. (40), 573–95.
47 Moseley, op. cit. (40), 613–14.
48 Moseley, op. cit. (40), 620.
49 Moseley, op. cit. (40), 620.
50 Moseley, op. cit. (40), 646.
non-Western traditions of medical astrology reinforced latent beliefs in the power of the Sun and Moon, which seem to have been prominent in naval lore. One individual whose work suggests such a reading is the naval physician James Lind (1716–94); best known today for demonstrating the prophylactic uses of citrus fruits against scurvy, but in his own time equally renowned for his writings on the medicine of warm climates. Although of relatively humble origins – like most naval surgeons – Lind became one of the most distinguished practitioners of his day. Possessing an international reputation, he was elected a Fellow of the Royal Colleges of Physicians of Edinburgh and Copenhagen, and of the Royal Society of Medicine of Paris. He also became Physician to the Royal Naval Hospital at Haslar and was in communication with many prominent natural philosophers.

Lind’s conviction that fevers were affected by lunar influences owed much to what seems to have been a common belief among naval men and practitioners in the tropics. In 1768 he wrote,

> It is a common observation, both at Bengal and Bencoolen, that the moon or tides have a remarkable influence there on intermitting fevers. I have been informed by a gentleman of undoubted veracity, and of great knowledge in medicine, that in fevers at Bengal, he could fortel [sic] the precise time when the patient would expire, it being generally about the hour of low water.\(^5\)

Lind also shared the Hindu belief that lunar and solar eclipses could exert a baneful influence:

> This much is certain, that in the year 1762, after a great sickness, of which it was computed 30,000 blacks and 800 Europeans died in the province of Bengal, upon an eclipse of the moon, the English merchants and others, who had left off taking the bark, suffered a relapse. The return of this fever was so general on the day of the eclipse, that there was not the least reason to doubt its effect.\(^5\)

Lind accordingly advised his readers to take doses of bark at the full and new moons, since these were the times when the fever was most likely to strike.\(^5\)

As in the West Indies, such beliefs rested on the widespread assumption that the Sun and Moon exerted a more powerful affect over nature in the tropics than elsewhere. The surgeon of the *Drake* Indiaman (also named James Lind) claimed that

> the influence of the sun and moon are very remarkable at Bengal, for occasioning relapses; hence it may be looked upon as an exciting cause of this disease [the putrid and remitting marsh fever]; so remarkable is it that a patient who has been recovered for eight or ten days will be at the greatest danger of a relapse, about the time of the lifting of the springs, i.e. two or three days before the full and the change. There are so many instances of this and it is so well known at Bengal, that it is enough to have mentioned it.\(^5\)

Lind (1736–1812), a keen astronomer and correspondent of the Lunar Society of Birmingham, of which Erasmus Darwin was a member, later believed that he might have overstated the influence of the Moon upon fevers, although he refused to rule it out

---

53 Lind, op. cit. (52), 82.
54 Lind, op. cit. (52), 82–3.
altogether. But others, who remained longer in Bengal, were convinced that it had a powerful effect. One such was Dr Francis Balfour, who explained in 1784 that

the residence of more than fourteen years in a country where, during eight months of the twelve, scarcely a drop of rain falls, or a cloud obscures the sky; and where the influence of the moon seems to show itself in an uncommon degree; has given me the opportunity of observing this influence in so great a number of cases, and with so little variation, that for many years past it has been firmly established in my mind, as a fixed principle, which has directed my practice on every occasion.\footnote{56}

Balfour, a physician at the East India Company’s European hospital in Calcutta, believed that certain phases of the Moon (the new and full moons) predisposed individuals to attacks of fever; usually of an intermittent variety, but also ‘putrid, nervous and rheumatic fevers’.\footnote{57} The Moon’s influence upon the body, according to Balfour, was analogous to its influence on the tides, and this could be seen in the way in which his patients’ fever seemed to ‘ebb and flow’ with the lunar cycle.\footnote{58} Balfour sought authority for this view in the work of Hippocrates,\footnote{59} but his main inspiration – as with Mead – was the work of Newton on gravitation.\footnote{60} Balfour also insisted – to an even greater extent than Moseley – on ‘a comprehensive system of experiments and observations’. He had arrived at his conclusions by keeping ‘a journal of every lunar day, containing a co-temporary record of fevers and other disorders’ as well as of ‘the heat, moisture, and weight of the atmosphere, and various winds’. Balfour supplemented this with ‘experiments and observations made in the state of electricity and putrefaction’ in relation to ‘the various revolutions of the sun, moon, [and] stars’.\footnote{61} Thus, Balfour, who authored two treatises on sol-lunar influences on fevers, had moved beyond Mead, having taken up Boyle’s plea for a systematic quantitative study of celestial phenomena and their relation to climate and health.

Balfour’s rigorous empiricism meant that his hypothesis could not be easily dismissed as mere conjecture. Indeed, he claimed that his work had even made some impact upon the profession in Britain. In his \textit{Treatise on Putrid Intestinal Remitting Fevers} (1790), Balfour alleged that ‘Dr Cullen [the distinguished Professor of Medicine at Edinburgh University], in his public lectures, is disposed to admit, in a certain degree, the operation of an influence connected with the revolutions of the Sun and Moon’.\footnote{62} However, this was hardly a ringing endorsement and Balfour was forced to concede that the theory of sol-lunar influence had generally been overlooked back in Britain. In India, however, Balfour was successful in gaining official backing for his work on the effects of sol-lunar phenomena on disease. In July 1794, Charles Shakespear, a servant in the East India Company’s Public Department,
wrote to Balfour informing him that ‘the Governor-General being always disposed to encourage the servants of the Company, on instances of publications that promote science, directs me to inform you, that the expense of your publication, entitled “A Treatise on Sol-Lunar Influence”, will be defrayed by government’. When facing an Anglo-Indian (the term then used to describe the British in India) audience, as he did at the Asiatick Society of Bengal in 1794, Balfour felt able to state that ‘to accumulate testimonies of the remarkable effects of sol-lunar influence in India is now almost superfluous. In Western parts of India it is no less generally acknowledged than in Bengal.’

One reason why some Anglo-Indian practitioners were convinced of the reality of sol-lunar influence in disease was that their impressions were confirmed by indigenous traditions of medical astrology. In 1801 Dr Helenus Scott of Bombay wrote to Balfour informing him that the influence of the moon on the human body, has been observed in this part of India by every medical practitioner. It is universally acknowledged by the doctors of all colours, of all castes [sic], and of all countries. The people are taught to believe in it in their infancy; and as they grow up, they acknowledge it from experience.

But Balfour also found some basis for their beliefs in the writings of Antoine Lavoisier and others who were conducting research into the composition of the atmosphere. He drew an analogy between the human body and the atmosphere – which was now generally acknowledged to be a mixture of various gases such as oxygen. The composition of both, he argued, might be subject to the influence of sol-lunar phenomena.

**Sol-lunar theories in Britain**

While sol-lunar theory thrived largely among British medical practitioners in the tropics, the doctrine did enjoy limited support at home. One of those sympathetic to the writings of tropical physicians was the poet, physician and evolutionary theorist Erasmus Darwin (1731–1802), who wrote of the effects of solar and lunar influence upon a variety of diseases in his *Zoonomia* (1794–6). Like Mead and subsequent sol-lunar writers, Darwin proudly proclaimed himself ‘a Newtonian physician’, but his theory of fevers, in which the influence of the Sun and Moon was acknowledged, was a novel one. Along with an increasing number of physicians, he distanced himself from overly ‘mechanical’ theories; thus whereas Pitcairn and Mead had written of blockages causing inflammation and fever, Darwin emphasized the action of the heat, the lack of which, he argued, caused the

---

63 Quoted in Francis Balfour, ‘Observations respecting the remarkable effects of sol-lunar influence in the fevers of India; with the scheme of an astronomical ephemeris for the purposes of medicine and meteorology’, *Asiatick Researches* (1808), 8, 1–34, 21–2.
64 Balfour, op. cit. (63), 21.
66 Balfour, op. cit. (63), 21.
67 Balfour, op. cit. (63), 22.
capillary vessels to become torpid or quiescent. This ‘sympathetic’ theory of fevers was also quite different from the ‘nervous’ theory of Cullen and the ‘putrid’ theory of James Pringle.

The distinctive feature of Darwin’s theory of fevers was the principle of stimulus. Lacking the stimulus of heat, the vascular system declined in vigour, causing the body to display febrile symptoms; an excess of such a stimulus led to muscle pains and ‘exhaustion of the spirit of animation’. These extremes, he argued, explained the different stages of fever in the human body, which were exacerbated by any coincidence with lunar or solar periods, or with diurnal periods of heat and cold. According to Darwin, celestial influences operated not just in intermittent and remittent fevers (the fevers upon which Balfour and others had concentrated) but in more common complaints such as smallpox and measles:

The critical days, in which fevers are supposed to terminate, have employed the attention of medical practitioners from the days of Hippocrates to the present time. In whatever part of a lunation a fever commences, which owes either its whole cause to solar and lunar influence, or to this in conjunction with other causes; it would seem that the effect would be the greatest at the full and new moon, as the tides rise heighest at those times…Hence I conclude, that the smallpox and measles have their critical days, not governed by the times required for certain chemical changes in the blood, which affect or alter the stimulus of the contagious matter, but from the daily increasing or decreasing effect of this lunar link of catentation.

Darwin was thus neither strictly an iatrochemist or an iatromechanist, although his theory of fever tended more towards the latter, notwithstanding his conception of a ‘spirit of animation’. We see this more clearly when Darwin elucidates the action of gravity upon the blood:

the attraction of these luminaries, by decreasing the gravity of the particles of the blood, cannot affect their momentum, as their vis inertiae remain the same; but it may nevertheless produce some change in them… As the tides of the sea obey the southing and northing of the moon… it is probable, that there are also atmospheric tides on both sides of the earth, which to the inhabitants of another planet might so deflect the light as to resemble the ring of Saturn.

It was a passage which might have been lifted straight from Mead’s Power and Influence. However, Darwin differentiated to a greater extent than Mead between the effects of the two luminaries and different sorts of disease. Chronic inflammatory diseases, he claimed, tended to observe the solar day, so gout and rheumatism tended to be less severe around midnight. Intermittent fevers returned at solar and lunar periods depending on their type, while hysteria and nervous fevers were tied particularly to the lunar cycle. He believed that the ‘stimulus’ which excited such complaints increased at new and full moons, and diminished in the intervening periods. This emphasis upon environmental stimuli was, of

---

71 Darwin, op. cit. (68), ii, 625.
72 Darwin, op. cit. (68), i, 452–3.
73 Darwin, op. cit. (68), ii, 453.
74 Darwin, op. cit. (68), ii, 460.
75 Darwin, op. cit. (68), ii, 375–6.
76 Darwin, op. cit. (68), ii, 377.
course, compatible with Darwin’s transmutationist theory of evolution, according to which organisms adapted in their efforts to meet the challenges of the external world. Like his contemporary, Lamarck, Darwin believed these new characteristics might be inherited by subsequent generations.  

The majority of British medical practitioners, however, continued to dismiss anything that smacked of medical astrology, and their reservations about the sol-lunar theory were no doubt confirmed by the fact that several unorthodox characters had jumped on the bandwagon. One such was the mystically inclined Ebenezer Sibly (1751–99), who had made a name for himself by editing a new edition of Culpeper’s *Herbal* and by his own writings on medical astrology. Sibly, perhaps, had more in common with seventeenth-century medical astrologers than contemporary sol-lunar theorists. His work, as Allen Debus has pointed out, accepted the essential harmony of macrocosm and microcosm, while displaying strong religious convictions. He had risen from a very humble background and had eked out a living at the margins of orthodox medicine. Sibly was the son of a Bristol artisan, and had at a very early age devoted himself to the study of medicine and astrology; the latter interest being shared by his brother, Monoah (1757–1840), a prominent Swedenborgian. Both brothers were of a radical political persuasion, and Ebenezer campaigned for the Whigs in the election of 1790. His medical career began as a surgeon in London but in 1792 he obtained, at the age of 41, an MD from King’s College, Aberdeen.

Like other sol-lunar theorists, Sibly was well aware that the ‘prejudice of the time was against astrology’, yet he believed that astrology was ordained by God and that it had a basis in science. However, he differed from others writing on celestial and planetary influences on disease in his insistence that each planet possessed ‘a particular specific property, according to their own innate quality, and according to the nature of that sign or band of stars, under which they happen to be posited’. According to Sibly, this was a ‘fact established by repeated observation and experience; for when the Sun enters the equinoctial sign Aries, the spring begins to shew herself, and all vegetative nature, by the Moon’s humidity, and Sun’s temperate heat, seems to revive and flourish, and, as it were, to rise from the dead’. The zodiacal trappings of Sibly’s writings set him apart from contemporary sol-lunar theorists but he was, like Darwin and Lind, a climatic determinist, who believed that living creatures were essentially malleable and that physical features such as skin colour (as well as temperament) were directly affected by climate. These

---

82 Sibly, *Complete Illustration*, op. cit. (78), i, 23.
83 Sibly, *Complete Illustration*, op. cit. (78), i, 23.
climatic conditions were linked ultimately to cosmological ones: ‘Europe being situated in the north-west part of the earth, is under Mars in Aries, and by reason of this planet... 

But what of celestial influences upon health? Here Sibly made few innovations, but simply repeated accepted wisdom on the subject: that lunatics had more violent fits at full moons; that chronic diseases such as rheumatism fluctuated according to the solar and lunar cycles; that those who slept in fields or on deck, fully exposed to moonbeams, would find ‘their heads oppressed with water and their senses inert and heavy’. Sibly invoked the familiar analogy between the effects of the Moon on human beings and its alleged effects on shellfish and cats’ eyes, and its supposed capacity to putrefy meat, all of which were deeply ingrained in folklore. In addition to this evidence, Sibly appealed to both science and scripture in order to validate his astrological theories. He pointed to the Newtonian theory of the tides and to the wonderful properties of the magnetic lodestone, which, he argued, it could not possibly possess ‘without the aid of some celestial matter, which is communicated to it by the influence of the pole-star, or some other heavenly bodies within the polar circles’. 

The whole cosmos, he believed, was informed by an ‘intellectual power’ akin to the part played by the soul in animating the human body. If this were not the case, he argued, nature would be inert and motionless. In this ‘world soul’ dwelled ‘the spirit of Almighty God, who filleth the heavens and the Earth with his presence, and from whence... he causeth the precious influences of the Sun, Moon, and stars, to be distributed into all parts of the world. And thus God rules immediately in the heavens, but rules mediatly by the heavens.’ He went on to cite Joshua 10: 12 and 13; 2 Kings 20: 11; John 9: 6 and 7 and other biblical passages as authority for such a view. There was nothing new in the idea that God governed the cosmos indirectly through celestial influences, but it was certainly untypical of eighteenth-century medicine.

That Sibly was predisposed towards such a synthesis of science and religion may be explained by his Swedenborgian and Masonic leanings, which are apparent in the vivid, angelic iconography of his books. The Swedish mystic Emanuel Swedenborg (d. 1772) wrote knowledgeably about metallurgy, astronomy and the tides as well as claiming inspiration through conversations with angels. This Swedenborgian synthesis of the practical and the speculative was enshrined in Sibly’s new science of ‘Uranology’, named after the recently discovered planet of Uranus. ‘Uranology’, he explained,

is a science which treats the natural body of Heaven, after the same manner as Geology describes that of the Earth; and speaks either generally, of the whole of Heaven; or specially of some distinct part of it. And as Uranology is a part of Physiology, so it has the same principles, whether internal, as Matter and Form; or external, as the causes Efficient and Final... It hath also affections internal as Motion and Rest; and the same external, as Time and Place...
Medical astrology to medical astronomy

Practical Uranology enabled a practitioner to

unbosom the remotest transactions of futurity, and to trace the mysterious and most obscure
operations of Nature to their Source; whence he defines the innate principles and virtues of all
animal, vegetable, and mineral substances, and points to their respective uses, for the lasting profit
and advantage of mankind.91

This, at any rate, was the task Sibly set himself in his bestselling book *A Key to Physic
and the Occult Sciences*, first published in 1794, which went through as many as six
ditions. With its many descriptions of the occult properties of plants, the book harked
back to Culpeper’s *Herbal* and may even have been modelled on it. Hence Sibly’s assertion
that ‘Vegetables bear relation to the seven planets, and have form and affinity with the
microcosm, or parts of man; and constitute the original aliment intended by the Creator
for the sustenance of our bodies.’92 In the tradition of seventeenth-century herbalists, Sibly
claimed that there was a sympathy between certain plants and certain ailments, or parts
of the body, which could be recognized by its distinctive ‘signature’. Thus any herb which
resembled the form of eyes, for example – such as eyebright, the scabious or the marigold
– was said to be useful in the healing of eye complaints. Such connections were part of a
complex web of correspondences and sympathies connecting macrocosm to microcosm –
sympathies between angelic and human spirits, and between celestial and terrestrial bodies
– the whole being governed by divine providence. But Sibly put a new gloss on this ancient
notion of sympathy. Writing amidst growing interest in mesmerism and ‘animal
magnetism’ in Britain in the 1780s, he saw the sympathy between macrocosmic and
microcosmic phenomena partly in terms of magnetism.93 The planets affected the ‘tides’
of magnetic effluvia said to exist in the human body and elsewhere in nature. Like Mesmer
(whose own doctoral dissertation at the university of Vienna was heavily indebted to
Mead’s *Power and Influence*),94 Sibly believed that these magnetic flows could be altered
by a skilled practitioner, by so-called ‘animal magnetism’ – a subject which is discussed at
length in his *Key to Physic*.

What are we to make of Sibly? Clearly, his unabashed use of zodiacal and angelic
imagery smacks of an earlier period, and was wholly absent from the works of
contemporary medical writers on sol-lunar influences. Despite giving ‘Uranology’ the
status of a science, akin to geology or physiology, Newtonian and magnetic explanations
of celestial influences remain very much subordinate to spiritual ones. But Sibly was also
a creature of his time, and his writings on medicine and astrology were in keeping with
those of other millenarian sectaries in later eighteenth-century England; not least the
medical astrologer and sex therapist James Graham (1754–94).95 Sibly’s writings display a
characteristic blending of religious and medical radicalism: a willingness to unite disparate
occult, religious and natural philosophical traditions and a desire to encourage self-reliance

91 Sibly, *Complete Illustration*, op. cit. (78), i, 53.
92 Sibly, *Key*, op. cit. (78), 35.
93 Sibly, *Key*, op. cit. (78), 256.
94 On Mesmer’s debt to Mead, see Frank A. Pattie, ‘Mesmer’s medical dissertation and its debt to Mead’s *De
in the treatment of disease. However, as Patricia Fara has pointed out in a recent book on magnetic practices and beliefs in eighteenth-century England, practitioners of animal magnetism like Sibly were also responding to a competitive medical market, in which diversity and distinctiveness provided some advantage. Indeed, all the indications are that Sibly made a good living from his books, which went through many editions, as well as from the sale of his famous solar and lunar tinctures, which, he claimed, counteracted the adverse influences of these luminaries. Like Graham and other Georgian quacks, Sibly was an able self-publicist, though lacking the former’s capacity for showmanship.

The later ‘Lunacists’

Despite the fact that sol-lunar theories of disease were ridiculed by the medical profession in Europe, several of the most influential Anglo-Indian doctors continued to declare in their favour. No less a figure than James Johnson (1777–1845) – one of the foremost Anglo-Indian practitioners of his day – stated in his Influence of Tropical Climates (1813) that ‘however sceptical professional men in Europe may be, in regard to planetary influence in fevers, etc., it is too plainly perceptible between the tropics, to admit of a doubt. I have not only observed it in others, but felt it in my own person in India, when labouring under the effects of obstructed liver’. It was not ancient dogma that led Anglo-Indian physicians to insist on a link between the Moon and fevers, but firsthand observation. That they believed such a connection to exist is understandable given the similarity between the lunar cycle and the periodic fluctuations of intermittent fever in particular. These experiences explain why even eminent practitioners like Johnson – a royal surgeon and the founder of the highly respected Medico-Chirurgical Review – persisted in their beliefs despite ridicule at home.

97 Sibly, Key, op. cit. (78), 322; ibid., Essay on the Virtues and Efficacy of Dr. Sibly’s Lunar Tincture; in All Diseases Peculiar to the Female Sex (Pamphlet of 18–?), Wellcome Institute for the History of Medicine Library, London; Porter, op. cit. (95), 103–4.
98 James Johnson was born in County Derry, Ireland, and moved to County Antrim at the age of fifteen to take up an apprenticeship with a surgeon apothecary. After spending two years as an apothecary’s assistant in Belfast, Johnson moved to London to study for a qualification in surgery, which he obtained in 1798. Immediately afterwards, Johnson gained employment as a surgeon’s mate on a naval vessel, and sailed to Newfoundland and Nova Scotia. In 1800 he took part in an expedition to Egypt and in 1803 sailed for India, where he remained until 1806. After returning to England, he continued to serve in the Royal Navy until 1814, when he left with a high reputation to practise in London. Johnson was well known in metropolitan circles, being surgeon to the Prince Regent and founding editor of the Medico-Chirurgical Review. DNB.
100 Johnson asserted that the link between the lunar cycle and fever had been ‘incontestably proved by daily observation, as the publications of the ingenious and respectable Dr. Balfour evince’. See his Influence, 1813 edn., 90.
But Johnson had no time for those who brought the lunar theory into disrepute by making outlandish and unsupported claims. Referring to the West Indian physician Benjamin Moseley, Johnson wrote,

But when we find a modern physician extend this influence not only to every species of disease in temperate climates, but to life, death, birth, – nay, even conception itself! – when we see him harrow up the dreams of the ancients, to give weight to the working reveries of his own imagination, then, indeed, we may expect to hear the whole theory turned into ridicule.¹⁰¹

In the fourth edition of his *Tropical Diseases* (1803), Moseley had cited with approbation the opinion of Aristotle that ‘no animal dies but at the same time of the reflux or ebbing of the tide’, and alluded to a similar belief held by many currently living on the southern coast of France.¹⁰² Moseley also cited Pliny the Elder, making use of his observation that ‘the fibres or streaks in the livers of rats, answer in number to the days of the moon’s age; and that the little creature, the ant, feels the moon’s influence, and never works at the time of the change’ (Pliny believed that the Moon was a spirit whose influence saturated the material world).¹⁰³ On reading this, Johnson expressed his astonishment that ‘any man not actually in a state of lunacy himself, could wade through such a sea of learning, in search of crude errors, puerile fancies, and absurd suppositions, that would disgrace the most superstitious legend of monkish ignorance’.¹⁰⁴

At a time when tropical physicians were asserting their intellectual independence it was vital that their work was not seen to be discredited in any way, and this may explain Johnson’s unusually forthright dismissal of Moseley. It should be remembered that those who sought to establish the lunar theory in metropolitan circles were facing an uphill struggle, since anything that smacked of astrology or occult influences was intellectually suspect. That the lunar theory proved far more popular in the tropical colonies, and especially in India, where it found many powerful exponents, can be explained by the prevailing view that the tropics were a distinctive disease environment, in which the Moon and the Sun exerted a more direct and powerful effect on human bodies than in temperate regions. But there may be other reasons for the popularity of lunar theory which were peculiar to India itself, not least the continuing importance of astrology in Indian medical systems. European physicians often consulted *vaidyas* and *hakims*, and it would not be surprising if they had come to share certain of their convictions about planetary influence over disease, even if they were explained in terms of gravitation.¹⁰⁵ Even so, the Newtonian idea of gravitation retained a certain occult quality and, according to the orientalist Sir William Jones, it had an affinity with certain aspects of Eastern philosophy. In one of his last discourses to the Asiatick Society of Bengal in 1794, Jones declared that

I can venture to affirm, without meaning to pluck a leaf from the never fading laurels of our immortal Newton, that the whole of his theology, and part of his philosophy, may be found in the *Vedas*, and even in the work of the Sufs. The most subtil spirit, which he suspected to pervade

---

¹⁰¹ Johnson, op. cit. (100), 90.
¹⁰² Moseley, op. cit. (40), 577.
¹⁰³ Moseley, op. cit. (40), 577–8.
¹⁰⁴ Johnson, op. cit. (99), 92.
¹⁰⁵ See Pearson, op. cit. (51); Grove, op. cit. (51); Boomgaard, op. cit. (51); Harrison, op. cit. (39).
natural bodies, and lying concealed in them, to cause attraction and repulsion – the emission, reflection, and refraction of light; electricity, calefaction, and muscular motion; is described by the Hindus as a fifth element, endowed with those very powers; and the Vedas abound with allusions to a force universally attractive, which they chiefly ascribe to the Sun, thence called Aditya, or the Attractor.  

Jones admitted that ‘these notions are vague … and unsatisfactory’ but doubted whether ‘the last paragraph of Newton’s incomparable work [i.e. the Principia] goes much further’, and whether any subsequent experiments had “thrown light on a subject so abstruse and obscure.”

Although only a few medical men appear to have shared Jones’s concern to establish European science and medicine within a common tradition of intellectual enquiry originating in ancient India, there were others who found parallels between Indian and Western ideas of planetary influences upon health. The translation, from the late eighteenth century, of Hindu medical texts acted as a further stimulus to such thinking among British medical men in India. By the 1840s it was common knowledge what such ancient authorities as Susruta had to say about the influence of the Moon and it was found that his writings corresponded closely with received wisdom about the influence of the Moon’s ‘age’ on the course of a disease.

However, one reason why the doctrine of sol-lunar influence enjoyed continuing popularity in British India was the onset of epidemic cholera in 1817. Prior to 1817 cholera had been confined largely to deltaic or ‘Lower’ Bengal, where it was endemic; although occasional outbreaks seem to have occurred over the preceding centuries in some of India’s ports. The cholera epidemics of 1817 onwards seemed – to both rulers and ruled – to presage a wider cosmological disorder. Many Indians attributed the epidemics to supernatural causes. They were commonly seen as expressions of divine wrath, incurred by disruptions of the Hindu cosmos by British military intervention. For the British, cholera similarly represented a crisis in imperial relations: its outbreaks often accompanied military campaigns (originating during the final campaign against the Marathas) and it seemed to show a marked ‘preference’ for the barracks of British soldiers as opposed to Indian lines. Moreover, the medical profession had no prior experience of such a disease and was, for some years, at a loss to understand its behaviour. There was little unanimity among medical practitioners as to the cause of the disease, although Anglo-Indian doctors tended towards a predominantly meteorological view of the causation of cholera, as opposed to one which stressed the role of contagion. These meteorological theories found their most picturesque expression in the idea of the ‘cholera cloud’, a sinister black presence which seemed to herald an epidemic.
The prevailing view of cholera was outlined by the Company surgeon Reginald Orton in 1820, who described the meteorological conditions which seemed necessary to the production of epidemic cholera. He drew attention to the direction of the wind and, in particular, to the supposedly baneful influence of those from the south-east. He noted the opinion of the Calcutta physician and lunar theorist Francis Balfour, who maintained that outbreaks of fever often coincided with a south-easterly. The German naturalist and explorer Baron Alexander von Humboldt had also remarked upon a similar phenomenon in Mexico. Humboldt had noted that the incidence of yellow fever peaked at the time of the vernal equinox, when south-easterly winds prevailed, and that the disease was scarce during the remainder of the year, when the winds blew from the north. So widespread was the association between wind direction and disease in the tropics (an association which can be dated at least to the writings of Bontius in the mid-seventeenth century) that a number of other Anglo-Indian practitioners attributed cholera to the influence of a south-easterly. The army surgeon James M’Cabe, for instance, had noticed that the 1818 epidemic in Madras was attended by a south-easterly which carried unusual quantities of rain.

Cholera, then, was initially thought to behave like any other epidemic disease, its incidence fluctuating inversely with atmospheric pressure. But in India it was thought that there was another powerful factor connected with the production of these meteorological conditions – the influence of the Moon. Many prominent medical men including Francis Balfour and the naval surgeons James Lind and James Johnson had implicated the Moon in the causation of fever. They had noted that outbreaks of intermittent fevers seemed to coincide with new or full moons; just as the course of the disease within a patient seemed to vary in accordance with the lunar cycle. Orton applied this theory to cholera, although, like his fellow ‘Lunacists’, he was conscious of the fact that his opinions met with the disapproval of the profession in Britain, who tended to regard any theories of planetary influence on disease as tantamount to a revival of occult practices in medicine. But the lunar theory was popular among military and naval surgeons in the tropics, and especially in India. Orton wrote that

‘the scepticism which evidently exists is truly surprising to persons in this country who daily witness the agency of this cause: for I will almost venture to assert, that there is no person in India… who will deny that the new and full Moon have a very marked influence in the production both of disturbed states of the atmosphere and diseases.’

One of the reasons, according to Orton, was that the Moon exerted a more powerful


113 Orton, op. cit. (111), 190–1.
114 Orton, op. cit. (111), 202.
influence over the human frame in the tropics than elsewhere; an influence, which, like Balfour, he explained in terms of Newtonian gravitation:

It may be shown on Newtonian principles, that all the situations in which the sun and moon have been found to produce their greatest effect in raising the tides, rarefying and disturbing the atmosphere, and in producing disease, their joint attraction for the earth, or certain parts of it, is greatest; and, on the contrary, when these effects are least evident, that their attraction is least. It is an established principle in the theory of the tides, that a high tide is produced by a diminution of the gravity of the waters...115

Just as the Moon exerted an influence on the tides, so, according to Orton, it exerted an influence on the atmosphere, determining its density. He believed that all the evidence pointed to the fact that barometric pressure was lowest at new and full moons (the 'syzygies') and at those periods when the Moon is closest to the Earth (the 'perigee'). These periods were associated with bad weather and disease, and in Orton’s experience most cholera deaths had occurred at such times.116 As well as causing rain and wind, Orton believed they produced a deficiency of the ‘electrical fluid’ of the atmosphere, which, in turn, caused a ‘deficiency of electric fluid in the blood’. Hence, the body became deficient in nervous energy and prone to attacks of disease.117

The lunar theory of fevers continued to claim the support of Anglo-Indian practitioners well into the nineteenth century but, by the 1830s, few physicians were prepared to admit anything like the influence claimed by Lind, Balfour or even Johnson. Dr H. H. Goodeve of the new Calcutta Medical School thought that these men had ‘fair ground for their belief’ and he, himself, regarded the Moon as ‘a very active agent in the periodic changes... to which our bodies are liable’. ‘It may not be that the Moon itself acts directly upon the human frame’, he explained,

but I think few would be prepared to deny the... manifest control which the ‘lamp of night’ exercises upon various phenomena of the air and weather. The moon perhaps ‘works at second hand’; but whatever may be its modus operandi, I think we require stronger arguments than have been adduced to overthrow the doctrines of the Lunacists. At the same time, I am not prepared to go to the absurd length to which sol-lunar influences, as he calls it, led Dr. Balfour.118

Although he did not reject the sol-lunar theory out of hand, Goodeve criticized Balfour’s treatise as being ‘full of the most inconclusive reasoning, supported by a pompous affectation of philosophical problems’.119 Yet in the late 1830s there were still a number of practitioners who were prepared to believe that the Moon had a direct influence, not only upon fevers, but also on chronic diseases. The surgeon James Murray was converted to the lunar doctrine after meeting an army officer subject to frequent, sudden attacks of dizziness and headache. He had also discerned the influence of the Moon in cases of epilepsy and of that of a woman suffering from ‘irritation of the spine’.120 As late as 1860,

115 Orton, op. cit. (111), 233.
116 Orton, op. cit. (111), 200, 226.
117 Orton, op. cit. (111), 301–2.
119 Goodeve, op. cit. (118), 132.
120 James Murray, ‘Cases illustrative of the influence of lunar agency as an occasional cause of periodical exacerbations in various chronic diseases’, Transactions of the Medical & Physiological Society of Bombay (1839), 2, 171–80.
the assistant apothecary J. D. Rozario claimed that the intermittent fever which had
ravaged Bassadore was subject to lunar influence, which he explained thus:

Supposing if malaria be present in the system of man at the flood-tide, the circulation in him may
be at its full vigour, enabling the system to maintain an ascendancy over the effect of malaria; this
would be similar to the constitutional resistory power; but just before the ebb there is a period
of rest as it were, when there is neither flood nor ebb, – the period of slack water. The fluid
circulation in man may experience similar changes, if so, the system will no longer be enabled to
maintain that ascendancy, and immediately the system feels the effect of malaria, which is a
sedative one, and the result is collapse, or the cold stage of fever.\footnote{J. D. Rozario, ‘An account of Bassadore, and of the fever prevalent there’, \textit{Transactions of the Medical & Physiological Society of Bombay} (1860), ser. 2, 6, App. 4, pp. xxiii–xxiv.}

Conclusion

While it is true that astrology lost, after 1700, the central place it had once enjoyed in
British medical culture, it was not confined thereafter to the realms of superstition, nor to
the likes of Ebenezer Sibly and other practitioners on the fringes of British medicine.
Indeed, the idea that celestial bodies exercised a profound influence on human health was
kept alive and refined in the writings of military, naval and colonial practitioners, some of
whom were of international renown. Individuals such as James Lind and James Johnson
can in no sense be regarded as marginal characters, even though their views on sol-lunar
influence were untypical of the majority of practitioners in Britain. Much the same can be
said for Erasmus Darwin, who seems to have been impressed by the observations of Lind
and other colonial physicians on the influence of the Moon on tropical fevers. That said,
it is clear that even the ‘Lunacists’ became progressively more cautious in advancing their
controversial theories, consciously abandoning the ‘excesses’ of previous generations. Still,
their persistence in the face of scepticism and ridicule at home tells us much about the
nature of medicine as practised in the East and West Indies during the eighteenth and early
nineteenth centuries. Above all, it illustrates the basic conviction that the tropics were a
distinctive disease environment, in which sol-lunar influences on health were more
apparent than in the temperate zones. This conviction may have been strengthened by the
existence of an indigenous medical tradition – in India – which also ascribed illness to
certain celestial phenomena. Certainly, Lind and Balfour cited indigenous Indian sources
when drawing attention to the link between celestial phenomena and disease. Astrological
medicine may also have been attractive to practitioners working in the tropics because they
felt particularly vulnerable to environmental forces. If disease was, in some sense, governed
by the movements of celestial bodies then it was, in principle, possible to identify those
periods when humans were most at risk.

The idea that human health is shaped by celestial influences has always been prominent
during periods of crisis, such as the plague epidemics of the 1660s or the cholera epidemics
of early nineteenth-century India. It may be for this reason that medical astrology – or,
rather, medical astronomy – became popular again many years later, during the Second
World War, when a number of books on the subject were written by reputable medical
men. In 1942 Clarence Mills, Professor of Experimental Medicine at the University of
Cincinnati, declared that the world’s climate and hence the world’s health depended on the
activity of the Sun and this, in turn, depended on the relative position of the planets in their
orbits around the Sun. Thus Man, he argued, was ‘not the independent master of his own life as he so fondly believed a few decades ago, but instead is pushed hither and yon by larger outside forces. He could learn a great deal from primitive sun worshipers, for he is still a veritable pawn of the universe’, a sentiment formerly expressed by the likes of Moseley.122

The same explanations cannot, however, account for the interest in medical astrology evinced by Sibly and other practitioners in England at the end of the eighteenth century. Their interest seems to have been strongly linked to an upsurge in religious and political radicalism, in which the Sibly brothers, especially, played an important part. For practitioners of humble origins – like Sibly – astrological medicine also provided a means of making a living. Although many ‘quacks’ were apparently reluctant to associate themselves with astrology, for fear of deterring respectable and wealthy patients, the popularity of Sibly’s books attests to the continuing marketability of astrological medicine. His writings no doubt chimed with a new willingness to explore alternative forms of spirituality and it is this dimension which most distinguishes Sibly from other sol-lunar theorists, as does his use of zodiacal vocabulary and paraphernalia. Yet Sibly shared with Darwin, and most of the colonial sol-lunar theorists, one fundamental belief: that of the malleability of the human frame. That is, the conviction that both temperament and physique could be radically altered by a change of climate – an opinion which was expressed by many eighteenth-century medical practitioners and philosophers, most notably Montesquieu.

It could, of course, be objected that (Sibly excepted) the sol-lunar theories of the eighteenth and early nineteenth centuries were quite different from the medical astrology of the seventeenth century; that such theories might be more appropriately termed ‘medical astronomy’ than ‘medical astrology’. But whilst Newtonian ideas of gravitation profoundly altered the way in which such ideas were expressed, nearly all Lunacists, from Mead onwards, saw themselves as working within a tradition stretching back to the time of the ancient Greeks. Alongside Newton, they continued to invoke the names of Hippocrates, Pliny, Celsus and Galen; all of whom wrote on the influence of celestial bodies upon human health. The sol-lunar theorists of the eighteenth and nineteenth centuries strove merely to place their observations on a more scientific footing, and in so doing they were following in the footsteps of seventeenth-century medical astrologers such as Gadbury, who sought to correlate meteorological statistics with the movements of the heavens. Continuity is also evident in the most common argument used by the Lunacists to explain the influence of heavenly over human bodies – the analogy of the Moon’s influence over the tides. Newton had quantified the gravitational pull of the Sun and the Moon upon the Earth and this enabled medical practitioners to talk more persuasively about the possible influence that they might exert on the human body, yet the argument was essentially the same as that advanced by astrologers earlier in the seventeenth century. Moreover, it should not be forgotten that gravity itself was still regarded as an occult force, inasmuch as the reason for its operation remained, as the orientalist William Jones put it in 1794, ‘abstruse and obscure’.