

PANPSYCHISM AND ASTROLOGY

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Consciousness is a conundrum. It is the most immediate and intimate fact of life, yet its nature and provenance resist scientific and philosophical analysis, and it is sometimes characterised (as will be seen presently) as lacking any basis in reality. Astrology is also a conundrum, not least because public belief in it remains strong despite it regularly being denounced in the name of science as lacking any basis in reality.¹ This is a discussion paper and as such it raises more questions than it answers. I will consider panpsychism – the view, briefly, that consciousness is present throughout the cosmos. This is a view admitted by its supporters and detractors alike initially to appear ‘absurd’ and ‘crazy’.² In particular I will consider the possibility that, in a panpsychic universe, meaningful interaction might occur between an individual and the cosmos in which they live.

Astrology will be taken as – so to speak – a test case for such meaningful interaction. When astrology is criticised in the name of science, this is typically on the basis of two issues. One is the lack of an explanation, in terms of Newtonian physics, for how it would work – how planets would affect life on Earth; the other is the lack of statistical evidence in terms of replicable correspondences between astrological factors and events in the world.³ In this paper I will ask whether both types of criticism may be obviated by panpsychism. I will consider parallels between astrology and divinatory practices, and will discuss astrology itself as a form of divination. I believe there are also parallels with some alternative therapies that presuppose deep involvement between mind and body, the human and the cosmic – acupuncture, for instance.⁴ My hope is that readers with no direct interest in astrology *per se* may, on this basis, still find interest in this paper.

The following section introduces the ‘hard problem of consciousness’ – which poses a dilemma for philosophy and for science because it seems as if it could imply a panpsychic reality. After this I will briefly discuss panpsychism and the related idea of animism – with particular reference to historic instances of animism being considered relevant to astrology. To lend perspective to these concepts, I

will then turn to mind-body dualism and the idea sometimes seen to follow from it – epiphenomenalism, the idea that mind is a secondary effect of physical processes. Panpsychism might either support or undermine astrology, an issue which will be considered under the heading ‘The celestial body problem’. This will be built upon by considering a panpsychic model of astrology proposed by David Hamblin, followed by my critique, which will consider parallels between astrology and mathematics via the anthropic principle.

The ‘Hard Problem of Consciousness’

The current interest in panpsychism derives to a significant extent from David Chalmers’ formulation of the ‘hard problem of consciousness’: ‘It is widely agreed that experience arises from a physical basis, but we have no good explanation of why and how it so arises. Why should physical processing give rise to a rich inner life at all?’⁵ In this, Chalmers added his voice to a chorus of similar sentiments echoing down the centuries, from thinkers such as Gottfried Leibniz, T. H. Huxley and William James.⁶ Each remarked that there is no known way in which physical events in the brain could generate consciousness. The conclusion drawn by Thomas Nagel was that:

unless we are prepared to accept... that the appearance of mental properties in complex systems has no causal explanation at all, we must take the current epistemological emergence of the mental as a reason to believe that the [physical] constituents have properties of which we are not aware, and which do necessitate these results.⁷

Either consciousness arises in a way that is miraculous (or at least unexplained), or – the panpsychic position – it is already somehow latent before it emerges in forms we recognise. Astrology has its own version of the ‘hard problem’. The craft is ‘the practice of relating the heavenly bodies to lives and events on earth, and the tradition that has thus been generated’, as the historian and philosopher of astrology Patrick Curry put it.⁸ An explanation of how there could be a meaningful connection between horoscopic factors such as the principal celestial bodies of the Solar System and events on Earth, has proved as intractable as an explanation of how the firing of neurons in the brain could generate consciousness.⁹

Panpsychism

Panpsychism stalks through the thought of many philosophers and scientists. Illustrations of this tendency include the contention of Alfred North Whitehead

(1861–1947) that ‘[t]he world is not merely physical, and nor is it merely mental’; and that of Arthur Eddington (1882–1944), that the knowledge of physics, ‘is only an empty shell... It is knowledge of structural form, and not knowledge of content. All through the physical world runs that unknown content, which must surely be the stuff of our consciousness’.¹⁰ The definition of the term ‘panpsychism’ is not free of controversy, but representative formulations from David Skrbina are that ‘all things have a mind, or a mind-like quality’, and that ‘[a]ll objects, or systems of objects, possess a singular inner experience of the world around them’.¹¹ I will not dig down into the nuances of the definitional disputes here – these are introduced by Skrbina in his book, as is the history of panpsychism in western philosophy, which I will also pass over in order to focus on this paper’s idiosyncratic trajectory.¹²

Francesco Patrizi of Cherso (1529–1597) is widely credited with first using the term ‘panpsychism’ in a work published in 1591.¹³ He wrote of ‘participation’ between different levels of being in the cosmos.¹⁴ In the same work, he praised Plotinus, Marsilio Ficino and Pico della Mirandola for their understanding of astrology, and included a translation of the *Hermetica* as the final section of the book.¹⁵ Patrizi thus looked more to Neoplatonism than the science that was beginning to take shape in his lifetime, leading his contemporary Johannes Kepler to characterise him as ‘lucidly insane’.¹⁶

Animism

‘Animism’ is a term which has been associated with both panpsychism and astrology. Skrbina described the term as:

most commonly used in a primitive, pre-scientific sense in which objects have “spirits” – e.g. the “spirit of the tree” inhabiting an oak... This dualistic and highly anthropocentric nature characterizes animism and distinguishes it from philosophical panpsychism... Animism thus is taken as having little if any philosophical standing.¹⁷

This unsympathetic evaluation corresponds with the intentions of Edward Burnett Tylor (1832–1917), who introduced the term to anthropology. For Tylor the term was innately pejorative. He used ‘animism’, in this weaponised sense, to dismiss astrology, remarking that ‘one of its fundamental conceptions, namely, that of the souls or animating intelligences of the celestial bodies, is rooted in the depths of savage life’.¹⁸ In similar vein, Franz Cumont (1868–1947), in his influential study of astrology’s early history, wrote that in Babylon circa the fifth century BCE, ‘Numerous traces are found of a primitive ‘animism’ which

regarded as divinities animals, plants, and stones, as well as wind, rain, and storm, and believed them to have mysterious relations with mankind'.¹⁹

The view of animism as a crucial part of the cosmology in which astrology prospered has been accepted by some influential twentieth century western astrologers. Thus Marc Edmund Jones (1888–1980) wrote of 'the survivals of a primitive animism in astrological practice', and Dane Rudhyar (1895–1985) wrote of 'The Animistic Stage' in human development as host to the beginnings of astrology.²⁰

The dismissive definition of 'animism' is open to challenge. For example, the professor of religious studies Graham Harvey argued that, 'Far from being a primitive, simplistic and irrational misunderstanding of the nature of life, animism has much to contribute to significant debates taking place in particular academic disciplines'.²¹ He advocated a 'new animism', characterised by 'a concern with knowing how to behave appropriately towards persons, not all of whom are human'.²²

When someone wishes to dismiss panpsychism from further consideration, a popular tactic is to allege that it would entail beliefs that would fit Tylor's definition of 'animism' – for instance that rocks are conscious – a position often taken to be sufficiently absurd as to require no rebuttal.²³ I will presently review an astrological argument whereby the celestial bodies – which might be characterised as large rocks – are conscious.²⁴ First it will be useful to delve into the philosophy of mind-body dualism in order to clarify what has long been the received wisdom regarding mind, body, and the relationship (or lack thereof) between them.

Dualism

Mind-body dualism – specifically as formulated by Rene Descartes – would have proscribed animism, had the term existed in his day. Thus he asserted that 'there are no powers in stones and plants that are so mysterious, and no marvels attributed to sympathetic and antipathetic influences... In short, there is nothing in the whole of nature...' which could not be explained in terms of 'principles which are known to all and admitted by all, namely the shape, size, position and motion of particles of matter'.²⁵ Whilst he also wrote of mind and soul, these had no place in the physical world: 'The only principles which I accept, or require, in physics are those of geometry and pure mathematics; these principles explain all natural phenomena...'²⁶ On this point Descartes echoed Galileo's assertion that the 'book' of the 'universe' 'is written in the language of mathematics'.²⁷

In Descartes' view, the physical universe is entirely distinct from consciousness:

I knew I was a substance whose whole essence or nature is simply to think, and which does not require any place, or depend on any material thing, in order to exist. Accordingly this “I” – that is, the soul by which I am what I am – is entirely distinct from the body²⁸

Hence the dualistic mind/body distinction found in Descartes’ writings between the mind, or *res cogitans* (‘thinking thing’, which has no physical extension) and the body, or *res extensa* (‘extended thing’, which has no consciousness).²⁹ In the ensuing centuries, the body (or matter) emerged as the dominant partner, so that it started to seem plausible that the mind would prove to be no more than a side-effect of physical processes.

Epiphenomenalism

In 1978 the biologist Edward O. Wilson expressed his belief that, in the future, ‘The mind will be more precisely explained as an epiphenomenon of the neuronal machinery of the brain’.³⁰ This is an example of the epiphenomenalist position, which was defined in four propositions by C. D. Broad (1887–1971):

(1) Certain bodily events cause certain mental events. (2) No mental event plays any part in the causation of any bodily event. (3) No mental event plays any part in the causation of any other mental event. Consequently (4) all mental events are caused by bodily events and by them only.³¹

There are a variety of closely overlapping epiphenomenalist views including ‘illusionism’ which is advocated, for instance, by Daniel Dennett and Keith Frankish.³² In introducing this approach, Frankish drew a parallel with the choice between a blue or a red pill in the film *The Matrix*: ‘I am going to offer you a different pill which – if it works – will convince you that your own consciousness is a sort of illusion, a fiction created by your brain to help you keep track of its activities’.³³

Galen Strawson has referred to such a denial of consciousness’s existence as ‘the silliest claim that has ever been made’ and ‘the Great Silliness’.³⁴ The rush to eschew the animistic beliefs that often underpin ‘wretched subjects’ stems, I suggest, from an assurance of epistemological absolutism that was articulated by Descartes: ‘the very fact that God is not a deceiver, and the consequent impossibility of there being any falsity in my opinions which cannot be corrected by some other faculty supplied by God, offers me a sure hope that I can attain the truth even in these matters.’³⁵ Under this view, our birthright as human beings is

certainty in all things, from which it follows that whatever cannot be proved to exist, must not exist – even if ultimately, as is the case with epiphenomenalism, what does not exist is ourselves.

There is perhaps a parallel here with the conclusion reached by Geoffrey Dean and his colleagues in regard to astrology: ‘to adequately test astrology the participation of the astrologer must be eliminated’, so any complications that preclude certainty would be discarded.³⁶ In the testing of astrology, as with the formulation of epiphenomenalism, consciousness is seen as a fly in the ointment of certainty. Another factor to be dismissed in the quest for certainty, the relevance of which will emerge towards the end of this paper, is emotion. As the neuroscientist Antonio Damasio put it: ‘Throughout most of the twentieth century, emotion was not trusted in the laboratory... not only was emotion not rational, even studying it was probably not rational’.³⁷ He pinned much of the blame for this on Descartes.³⁸

Science has moved on from the Cartesian apartheid between mind and matter. Hence, for example, Werner Heisenberg (1901–1976) wrote:

When we speak of the picture of nature in the exact science of our age, we do not mean a picture of nature so much as a *picture of our relationships with nature*. The old division of the world into objective processes in space and time and the mind in which these processes are mirrored – in other words, the Cartesian difference between *res cogitans* and *res extensa* – is no longer a suitable starting point for our understanding of modern science... Science no longer confronts nature as an objective observer, but sees itself as an actor in this interplay between man and nature.³⁹

The science whose trajectory was shaped by Descartes and Galileo, amongst others, and which eroded belief in the reality of consciousness, has now reinstated consciousness. Hence, as Mary Midgley put it, ‘In many areas, the advantages of ignoring ourselves have run out’.⁴⁰ This rehabilitation of consciousness surely makes panpsychism more plausible in principle. Even were it to be proven, however, it is by no means certain what consequences this would have for astrology.

The Celestial Body Problem

A problem for astrology in a panpsychic universe would be that it could be rendered superfluous by *Psi*. (I use the term in the same broad sense as was advocated by its originators, Robert H. Thouless (1894–1984) and Bertold

Paul Wiesner (1901–1972), comprising related terms such as ‘extra-sensory perception’ and ‘psychokinesis’.⁴¹) The issue can be seen in the judgement of the psychologist and statistician Suitbert Ertel (1932–2017), at the conclusion of a discussion of tests of astrologers:

Confirmations of classical astrological predictions... do not verify astrological beliefs. Correct astrological diagnoses, if they occur, might be due, e.g., to paranormal intuitions of psi-gifted astrologers. Parapsychological phenomena are likely to eventually become reconcilable with the growing body of scientific knowledge; astrology is far from having the same chance.⁴²

This issue was also raised by the professor of philosophy Stephen E. Braude. Discussing his wife Gina’s astrological work he observed that her ‘accuracy in astrological forecasting seems conspicuously tied to quite specific features of the chart wheels she calculates’; at the same time, however, he felt ‘there has to be more to the story – in particular a psychic element, whether it’s Gina’s extrasensory and wide-ranging scanning for relevant information, her psychokinetic nudging of events, or her telepathic influence’.⁴³

Panpsychism may make Psi phenomena somewhat plausible, but this creates a problem for astrology regarding the status of the celestial bodies. The issue may be framed by a comparison with systems of divination such as the *I Ching* or tarot. One will sometimes encounter the idea that in casting divinatory tokens (such as yarrow stalks, or coins, or cards) a meaningful arrangement can be created by a form of Psi; for instance, perhaps the unconscious mind uses psychokinesis to influence the fall of the tokens, thereby conveying its greater insights.⁴⁴ The locations of the planets at any time is however – unlike the fall of yarrow stalks – known in advance. Hence it can be argued that panpsychism undermines astrology in two ways. First, the ‘tokens’ of astrology – celestial bodies – seem precisely the type of object that would not co-operate with Psi, on account both of their mass, their distance from the Earth, and their inexorable movement. Second, it seems that panpsychism would in any case remove the need for tokens of any kind. This last point requires elaboration.

I take it that in discussing astrology one discusses a craft in which the astronomical positions of the celestial bodies play a key role. This is in line with Curry’s definition, cited earlier. It is necessary to reiterate this because, as has just been discussed, seemingly astrological phenomena might be explicable through the exercise of Psi – thereby bypassing the celestial bodies and ensuring that whatever took place, it would not strictly be astrology. Indeed some

commentators – the psychologists Rollo May (1909–1994) and Thomas Moore are examples – see a useful role for ‘astrology’, but only for so long as it is a purely subjective tool, a ‘myth’ or ‘mythology of the soul’ with no necessary connection to the physical world and its celestial bodies.⁴⁵

The issue of whether astrology does, or does not, have a necessary connection to astronomical bodies can be illustrated through the idea that astrology is a language. This was advocated in modern times by, amongst others, Dane Rudhyar (1895–1985). Rudhyar compared astrology to a language (sometimes to algebra), and on one occasion said that the natal horoscope is ‘the message of the universe to you – a message in the celestial language of symbols’.⁴⁶ The bare statement that astrology is a language is compatible with the idea of it being a purely subjective mythological system. When, however, Rudhyar’s additional clause is added – that astrology is a language *which the universe uses to convey messages to us* – then what is being claimed is not entirely in the realm of the subjective. There would need to be some correlation between the positions of the planets and whatever message the universe wants to convey, just as there would be a correlation between words used and a speaker’s intended message.

The existence of a problem, verging on paradox, in astrological thought on this issue was identified by Nicholas Campion. After establishing that the description of astrology as ‘a symbolic language’ is popular amongst astrologers, he remarked that the interpretation of astrology’s symbolism was often attributed mainly to the astrologer’s intuition, yet with the positions of the celestial bodies still (somehow) crucial. Hence the problem ‘that astrology can simultaneously lack any content or connection with astronomical order, yet make definite statements which are justified by that order’.⁴⁷ This is the same problem that Stephen Braude raised.⁴⁸ In order to pursue the question of if, and how, panpsychism might apply here, I will consider an article by the astrologer David Hamblin in which he argued a case for panpsychism as an explanatory system for astrology.⁴⁹

David Hamblin’s Panpsychic Model

Under Hamblin’s account, there is a cosmic hierarchy wherein ‘At each level, the organisms are in service to the organisms at the next level up in the hierarchy, even though they may not be aware of this’.⁵⁰ The particular relevance of this is that the Earth – which Hamblin identifies as ‘Gaia’ – ‘is at a higher level of consciousness than ourselves... [and] contains within herself the sum total of all the “consciousnesses” of all the creatures on her surface’.⁵¹ This includes astrological knowledge:

when Venus moves into Gemini, she starts to behave in a Geminian way because Gaia is telling her that these are the qualities of this particular area of the sky. Venus, like the other planets, is Gaia's pupil and is reflecting back to Gaia the information that Gaia has given to her.⁵²

This is the *type* of explanation that would be needed to integrate astrology into a panpsychic cosmos, in that it provides a necessary role for the celestial bodies. Further, it attempts to address the 'celestial body problem' by having Venus et al. reflect astrologers' interpretations back into reality. I believe, however, that there are two problems in the detail of Hamblin's explanatory model, to which I now turn.

The Combination Problem

In Hamblin's account, Gaia possesses a digest of all the astrological thought of the creatures on her surface. It is not clear how this concept could navigate past the 'combination problem', a well-established challenge for panpsychism.⁵³ The gist of the problem was formulated by William James:

Take a sentence of a dozen words, and take twelve men and tell to each one word. Then stand the men in a row or jam them in a bunch, and let each think of his word as intently as he will; nowhere will there be a consciousness of the whole sentence... The private minds do not agglomerate into a higher compound mind.⁵⁴

There are missing steps between thoughts existing in the minds of individuals, and Gaia's arrival at a comprehensive overview. The issue here would be particularly acute in the case of astrology, because of the lack of agreement between astrologers over technical matters. Thus to take Hamblin's example, when a western astrologer would say 'Venus has entered Gemini', a practitioner of *jyotish* – the horoscopic tradition which is practised mainly on the Indian subcontinent – would consider Venus to be a few degrees into the sign of Taurus. So that even if Gaia *were* somehow able to extract and subsume all the astrological thought arising in humanity, the agglomeration of astrological perspectives could not be distilled into the coherent, unitary account that would be necessary for Hamblin's theory to work.

Given this problem, it seems that in order for something like Hamblin's model to function, it would be necessary for a level of responsiveness to exist from the celestial bodies to astrologers *on an individual basis*, in which the

idiosyncrasies of each astrologer's approach would be acknowledged and incorporated. The approach would then be similar to the view of 'astrology as divination' which has been advocated by Geoffrey Cornelius and Maggie Hyde.⁵⁵ This is to say that astrology would be a dialogical process, taking place within a responsive cosmos – to use terms advocated by Lindsay Radermacher and James Brockbank, respectively, in discussions of the philosophy and cosmology that could inform astrology as divination.⁵⁶

Relationship of Mind and Cosmos

The second problem I see in Hamblin's account is that consciousness is largely treated as if it were a physical force. For instance, the account of the celestial bodies storing and replaying astrological data from human consciousnesses, routed through Gaia, resembles a computer backup system, with planets functioning like hard drives. The question can be asked whether this exhausts the possible manifestations of consciousness.

There is precedent for this question in the history of philosophy. Whitehead accused Descartes of failing to explore the nature of consciousness after arriving at his *cogito*: 'like Columbus who never visited America, Descartes missed the full sweep of his own discovery, and... continued to construe the functionings of the subjective enjoyment of experience according to the substance-quality categories.'⁵⁷ Whitehead's position was distilled by Pierfrancesco Basile: 'The paradox of Descartes' philosophy is that he divorced the subject from the material world, but at the same time continued to interpret it in terms of ontological categories derived from that world, as if the self were a "thing"'.⁵⁸ In order to draw out an alternative to self-as-thing, with particular relevance to this discussion, I will draw on William James's discussion of *intimacy*.

In defining intimacy, James took aim at any system which 'leaves the human subject outside the deepest reality in the universe', characterising and advocating an approach opposed to such alienation:⁵⁹

From a pragmatic point of view the difference between living against a background of foreignness and one of intimacy means the difference between a general habit of wariness and one of trust. One might call it a social difference, for after all, the common *socius* of us all is the great universe whose children we are.⁶⁰

In James's late philosophy, intimacy emerged as, in David C. Lamberth's words, 'James's most general criterion for distinguishing good philosophy'.⁶¹ The breadth of the term's reach is matched by the complexity of its significance –

Lamberth characterised it as ‘a phenomenological affect, a variable, concrete and independent feature of real metaphysical relations, and ultimately... an ideal for human action’.⁶²

I should register two caveats at this point. First, in introducing the term ‘intimacy’ in its Jamesian sense I do not wish to smuggle into the discussion the lofty valuation James assigned to it; in this paper I use the term solely to help articulate two different ways of viewing the world. Second, a somewhat related point, James spoke more of pantheism – the denial that God and the world are ontologically distinct – than of panpsychism and so in quoting him it may seem that I am conflating the two terms.⁶³ James however used the term ‘panpsychism’ in contexts where, at the least, its meaning overlapped substantially with the meaning of pantheism.⁶⁴ As Lamberth remarked, ‘[a] number of James’s comments about pantheism could be read panpsychically... Where one would close the floodgate on this effort, however, is unclear’.⁶⁵ Certainly, pantheism and panpsychism were closely related terms for James, and he is not alone in this; for instance, Macquarrie observed that ‘pantheism often combines with a doctrine of panpsychism’.⁶⁶ In what follows I take it that James’s panpsychism is, for the purpose of this discussion at least, practically indistinguishable from his pantheism.

James applied the criterion of intimacy to pantheism and found it necessary to distinguish ‘two subspecies [of pantheism], of which the one is more monistic, the other more pluralistic in form’.⁶⁷ This yielded a distinction between *monistic pantheism*⁶⁸ and *pluralistic pantheism*.⁶⁹ He characterised monistic pantheism by citing Spinoza’s contention that ‘all things are in God, and so depend on him, that without him they could neither exist nor be conceived...’.⁷⁰ Spinoza’s monistic pantheism was not satisfactory, in James’s view, because of ‘the impossibility of being intimate with *his* God’.⁷¹ James’s objection was that a monistic account of ‘Absolute Mind’ ‘does not account for our finite consciousness’.⁷² The point here is that under a thorough-going monist account, ‘nothing exists but as the Absolute Mind knows it’.⁷³ This would deny all reality to human experiences of ‘change... history... novelties, struggles, losses, gains’, with the ‘Absolute Mind’ disengaged from the vicissitudes of individual human lives.⁷⁴

If monistic pantheism were invoked as an explanatory system for astrology, similar problems would arise, for horoscopes are read in order to gain insight into human issues – career and relationships for instance – to which monistic pantheism would deny reality and significance. There is therefore nothing in monistic pantheism that could explain why astrology would function. To my mind, Hamblin’s account has much in common with monistic pantheism. Although he portrays the celestial bodies as reflecting back humanity’s astrological concepts,

there is no indication of why they might see this as something worthwhile, nor of how those concepts would be connected to the issues (such as ‘should I accept this job offer’) that might be of interest to individual human beings. In fact, under Hamblin’s account the consciousnesses of the beings who inhabit the Earth would be reduced to little more than epiphenomena whose purpose is to serve the consciousness of Gaia.

I would like to suggest that a significant problem in Hamblin’s account arises from the absence, in it, of the possibility of intimacy between individual beings and the cosmos in which they live. Such an absence typifies much contemporary scientific discourse. Thus Mary Midgley remarked that ‘hostile imagery about nature’ of the kind seen in the writings of Francis Bacon (1561–1626) has become the norm in science, whilst ‘affectionate and respectful imagery such as [Marsilio] Ficino used’ is not allowed.⁷⁵ Hence, she argued, no modern scientist ‘could ever dare to use terms such as *love* for forces of attraction, though today equally anthropomorphic – but hostile – words such as *spite*, *cheat*, *selfish* and *grudging* are the accepted coin of sociobiological discourse’.⁷⁶ If Hamblin allowed that love between parts of the cosmos could play a decisive role then his model would not be far away from the Neoplatonic one advanced by Ficino when he suggested that ‘the parts of this great animal, that is all the bodies of the world... borrow and lend natures to and from each other. From this common relationship is born a common love; from love, a common attraction. And this is the true magic’.⁷⁷

Although, as Midgley remarked, ‘love’ is not part of contemporary scientific argot, explorations in neuroscience suggest that the exclusion of emotion may restrict our vision. The research of Antonio Damasio, referred to earlier, is relevant. Surveying the neurological research he had amassed, he concluded,

Well-targeted and well-deployed emotion seems to be a support system without which the edifice of reason cannot operate properly. These results and their interpretation called into question the idea of dismissing emotion as a luxury or a nuisance or a mere evolutionary vestige.⁷⁸

If consciousness pervades the cosmos, as panpsychism suggests, and if a quality approximated by the word ‘emotion’ is an integral feature of that consciousness, then a universe of the kind advocated by Ficino begins to seem possible once more.⁷⁹ Since Patrizi held Ficino in high esteem, such a perspective would (incidentally) be consonant with the intentions of the man who coined the term ‘panpsychism’.

At this point, however, the ‘celestial body problem’ rears its head once more. A strength of Hamblin’s account is that it integrates the physical planets into the functioning of astrology. An explanation based in Ficinian love seems as though it might bypass the celestial bodies altogether, just as (in Ertel’s account, cited earlier) Psi might do. Astrology continues to seem a problematic hybrid, needing celestial bodies to function both as material entities and as signifiers of meaning and agents of dialogue for human beings. If these dual roles are to be reconciled, it seems to me that the celestial bodies need to be seen as constituent parts of a language – as already discussed – taking place within what might be dubbed anthropic panpsychism. This will require some explanation, and I will try to open the theme up by considering mathematics.

Mathematics and the Anthropic Principle

Descartes was pleased to take the advances occasioned by mathematics and its extrapolation into the physical sciences as evidence for God’s bestowal of the means whereby humanity could arrive at certainty. The *provenance* of mathematics however is a question with the potential to erode that certainty. This can be summarised by observing that, according to Darwin’s theory of natural selection, the human organism has evolved to relate to the world in a way that allows us to survive. As Steven Pinker put it, ‘Our minds evolved by natural selection to solve problems that were life-and-death matters to our ancestors, not to commune with correctness’.⁸⁰ Until very recently in human history there would have been no benefit in formulating calculus, therefore no reason for such a faculty to develop.

Albert Einstein referred to this problem as ‘an enigma... which in all ages has agitated inquiring minds. How can it be that mathematics, being after all a product of human thought which is independent of experience, is so admirably appropriate to the objects of reality?’⁸¹ Einstein’s distinction between ‘human thought’ and ‘objects of reality’ here is revealing: given this kind of dualistic separation, it is difficult indeed to see how mind could penetrate the mysteries of the physical universe. So the existence of mathematics, and particularly its successful application through the physical sciences, can be taken to argue for a rapprochement between mind and matter of the kind embodied in panpsychism.

An argument with possible relevance can be found in the work of Carl Jung. In describing one of his astrological experiments, Jung wrote that ‘a secret, mutual connivance existed between the material and the psychic state of the astrologer’.⁸² This has emerged as a key phrase in discussions of synchronicity, and divination, in relation to astrology.⁸³ In order to address the question of how the human mind could conceive a mathematical language so efficacious

that it seems to map and to open out unimaginable dimensions of physical reality, it might be conjectured that there is a secret – and systemic – mutual connivance between the human mind and the cosmos in which we live, which finds expression in the laws of mathematics.

With this postulation of connivance between the cosmos and the beings which inhabit it, one enters the outskirts of the *anthropic principle*. Brandon Carter coined this term in 1974.⁸⁴ He characterised it as a measured adjustment against ‘exaggerated subservience to the “Copernican principle”’, arguing: ‘Copernicus taught us... that we must not assume gratuitously that we occupy a privileged *central* position in the Universe. Unfortunately there has been a strong... tendency to extend this to a most questionable dogma to the effect that our situation cannot be privileged in any sense’.⁸⁵ Writing twenty-nine years after Carter’s original formulation, Bostrom estimated that more than thirty variants of the anthropic principle (on a spectrum from ‘weak’ to ‘strong’) had been proposed.⁸⁶ The particular form that would be most relevant here would come from the ‘strong’ end of the spectrum: ‘The strong anthropic principle suggests that the fact that we exist imposes constraints not just on our *environment* but on the possible *form and content of the laws of nature themselves*’.⁸⁷

Pursuing such a possibility, the physicist and science writer Paul Davies raised the question, ‘*Why* is nature shadowed by a mathematical reality?’⁸⁸ He concluded:

I am convinced that human understanding of nature through science, rational reasoning and mathematics points to a much deeper connection between life, mind and cosmos... life, mind and physical law are part of a common scheme, mutually supporting. Somehow, the universe has engineered its own self awareness.⁸⁹

The question arises as to whether the calculation of quantities and forces through applied mathematics exhausts what the universe’s self-awareness is capable of, or whether it has another dimension – a more qualitative, relational side – and, if so, whether that other dimension can find expression through astrology. Rudhyar remarked that ‘astrology and mathematics... invest with coherence, pattern, logic and order whatever substantial reality is associated with them’.⁹⁰ His equation of the two disciplines has always struck me as one of his more exuberant claims, and yet the anthropic principle seems as if it could, in principle at least, support such a possibility. Although the two disciplines – mathematics and astrology – function differently in many ways, it is possible that each is a language through which the cosmos (so to speak) reaches out to

meet the individual, providing enough structure and orientation for meaningful interaction and discovery in specific enquiries.

The classical scholar Crystal Addey wrote that, in Neoplatonic theurgy, ‘theurgic symbols were considered to have an ontological link with the deity from which they were derived’.⁹¹ In this setting, a symbol ‘could be a physical object such as a plant, gemstone, herb or type of incense’.⁹² It has emerged in this paper that panpsychism can be interpreted (with a little work) as incorporating an ontological link between individual human beings, celestial bodies, and the more-than-human (however one might conceive thereof). Under this account, not only would rocks be conscious; some of them might, as it were, talk to us.

I am aware that this possibility will stretch the belief of many. That may however be the point. The Roman astrologer Marcus Manilius (fl. first century CE) wrote that astrology had been given to humankind ‘that awe might be roused not only by the appearance but by the power of things, and that mankind might learn wherein lay God’s greatest power’.⁹³ An astrology which functioned as a reliable information system, operating through easily-discerned principles, would not fulfil this function.⁹⁴ On this basis, and with apologies to Niels Bohr, I acknowledge that this theory of astrology as a manifestation of anthropic panpsychism may be crazy, yet wonder, is it crazy enough?⁹⁵

Conclusions

In the wake of the scientific revolution the view burgeoned that it would be possible to explain the entirety of the world as we experience it, *including the fact of this experiencing*, exclusively in terms of material science. The existence of consciousness itself has however remained inexplicable within this frame of reference. Lacking a viable account of how or why an entirely material cosmos would generate consciousness (or even the appearance thereof), it behoves us at least to consider the possibility that consciousness subsists in all materiality. This principle is embodied in panpsychism, a position which negates Cartesian dualism as an ontological absolute.

If mind is inseparable from matter, many consequences follow for the relationship of humanity to the cosmos. Some of these have been examined in this paper, taking astrology both as a subject of interest in its own right and as an illustrative example of some of the issues that must arise whenever the possibility of meaningful interaction between human beings and their cosmic environs is discussed. Given a panpsychic universe, some long-standing criticisms of astrology lose purchase. The basis of those criticisms can broadly be grouped into two types. The first is the lack of a causal physical mechanism by which astrology could work. The second is a paucity of simple correspondence between

astrological factors and facts in the world, of the kind whereby (say) Mars in one part of the sky at birth would map onto one type of event in the world, such as a particular choice of career.⁹⁶ Both criticisms presuppose a need for evidence that would be, or would follow, a mechanical process. Both therefore rest upon the assumption that a true astrology would function as if the cosmos were a great machine. If the cosmos has non-machine-like characteristics – if it is in some way conscious, animate – and if astrological work depends upon this quality, then it would follow that much evaluation of astrology has been misguided. This should be a challenge to any critic of astrology who aspires to scientific and philosophical coherence. By the same token there is a challenge to those astrologers, and clients of astrologers, who believe that astrology can and should deliver information on demand, as if one were eliciting information from a cosmic predecessor of Google. In this paper I have touched on the account of astrology *as divination*; this casts the work of the astrologer as dialogical and hence more enigmatic, nuanced and context-dependent than would be the case if astrology functioned as a simple information system.

There can be no absolute and definitive conclusion here, only conditional statements. One option is as follows. *If* panpsychism is a valid account, *then* consequences follow for our relationship to the cosmos which *might* extend so far as to support an account of astrology as divination. I have argued that in order for astrology, as generally understood and defined, to be encompassed it would be necessary to factor in meaningful reciprocity between the cosmos and individual human beings which would encompass matter (celestial bodies) and mind (the conceptual apparatus and judgements of an astrologer). I discussed this potential manifestation of panpsychism by reference to the anthropic principle, and also – referring back to the origins of the term ‘panpsychism’ – to concepts of an ordered, loving, cosmos as found, for instance, in the works of Marsilio Ficino. Given this historical context, panpsychism and astrology can be seen as ideas which were shouldered to one side by the scientific revolution, but which might repay fresh evaluation.

There is an alternative possibility. If the ‘hard problem of consciousness’ were to be explained on an entirely material basis, that would fill the ontological vacuum which panpsychism might otherwise occupy. This would banish the prospect of meaningful interaction between the consciousness of the individual and the larger universe. It would do so since – given the reach of epiphenomenalism – it would banish the very idea of a conscious individual. It should be challenging, therefore, for a materialist critic of panpsychism to find a way to challenge the idea of consciousness’s ubiquity that would not simultaneously undermine any basis upon which there would really be a

conscious individual such as themselves to be aware of such an issue – let alone to weigh it and arrive at a rationally-based conclusion. Crazy as panpsychism may appear, therefore, it may not be as crazy as an alternative position which, as it is being made, disproves the existence of the one making it and any basis in reality their argument could have.

Notes

1. Thus, for instance, Gallup polls in America, Canada and the UK, conducted in 2005, suggested that 25% of people in each country believe in ‘Astrology, or that the stars and planets can affect people’s lives’. Nicholas Campion has suggested that this figure may be an underestimate, arguing that polls showing 70% of people believe in astrology may be nearer the mark. Alec Gallup and Frank Newport, eds, *The Gallup Poll: Public Opinion 2005* (Lanham, MD: Rowman & Littlefield, 2007), p. 221. Repeated at <http://www.gallup.com/poll/19558/paranormal-beliefs-come-supernaturally-some.aspx> (accessed 2 April 2021). Nicholas Campion, *Astrology and Popular Religion* (Farnham: Ashgate, 2012), p. 1, p. 157 – full analysis of sources is in the note to table 11.5 at p. 157.

2. For ‘absurd’, see John Searle, ‘Consciousness & the Philosophers’, *New York Review of Books* 44, no. 4 (6 March 1997): p. 45; for ‘crazy’, see Philip Goff, ‘Panpsychism is crazy, but it’s also most probably true’, at <https://aeon.co/ideas/panpsychism-is-crazy-but-its-also-most-probably-true> (accessed 23 January 2021).

3. A succinct example that encompasses both types of objection is Richard Dawkins’ complaint that ‘astrology has nothing going for it at all, neither evidence nor any inkling of a rationale which might prompt us to look for evidence’, Richard Dawkins, ‘The Real Romance in the Stars’, *Independent on Sunday*, 31 December 1995, p. 18.

4. Illustrative quotations: ‘The changing nature of Qi between a material substance and an ethereal, subtle force is central to the Chinese medicine view of body and mind as an integrated unit’, Giovanni Maciocia, *The Foundations of Chinese Medicine – A Comprehensive Text for Acupuncturists and Herbalists* (New York: Churchill Livingstone, 1989), p. 2; ‘Simplistically speaking, the universe is the macrocosm and the human body is a microcosm within it’, Zhanwen Liu, Liang Liu et al., eds, *Essentials of Chinese Medicine*, Volume 1 (Dordrecht: Springer, 2009), p. 37.

5. David J. Chalmers, ‘Facing up to the Problem of Consciousness’, *Journal of Consciousness Studies* 2, no. 3 (1995): pp. 200–01.

6. Gottfried Leibniz, *The Monadology and Other Philosophical Writings*, trans. Robert Latta (1714; London: Oxford University Press, 1898), pp. 227–28, *Monadology* section 17; Thomas H. Huxley, *The Elements of Physiology and Hygiene; a Text-Book for Educational Institutions* (New York: Appleton, 1868), p. 178, Chap. IX, para 238; William James, ‘Human Immortality: Two Supposed Objections to the Doctrine’, in William James and Gerald E. Myers, eds, *William James: Writings 1878 – 1899* (1898; New York: The Library of America, 1992), p. 1113.

7. Thomas Nagel, *Mortal Questions* (Cambridge: Cambridge University Press, 1979), p. 187.

8. Patrick Curry, ‘Astrology’, in Kelly Boyd, ed., *Encyclopaedia of Historians and Historical Writing (Vol. 1)* (London: Fitzroy Dearborn, 1999), p. 55.

9. In what follows, references to ‘celestial bodies’ should be understood also to

imply other horoscopic factors – it would be tedious to repeat this each time.

10. Alfred North Whitehead, *Adventures of Ideas* (Cambridge: Cambridge University Press, 1933), pp. 244–45; A. S. Eddington, *Space Time and Gravitation* (London: Cambridge University Press, 1920), p. 200.

11. David Skrbina, *Panpsychism in the West* (Cambridge, MA: Massachusetts Institute of Technology, 2005), p. 16. There is also a revised edition published 2017.

12. Discussed at Skrbina, *Panpsychism in the West*, pp. 15–19, and chapters 2–9, respectively.

13. Francesco Patrizi, *Nova de Universis Philosophia* [*New Philosophy of the Universe*], 2nd edn (Ferrara, 1591; Venice: Robertus Meietus, 1593). ‘Pampsychia’ is the title of the third section, pp. 47–60. Cited as the first use of the term by, e.g., Skrbina, *Panpsychism in the West*, p. 70. The term actually used was ‘pampsychia’, an archaic form – Skrbina remarks that at it is not clear why Patrizi used this, since ‘panpsychia’ would have been more consistent usage (Skrbina, *Panpsychism in the West*, p. 275 n.3).

14. Paul Oskar Kristeller, *Eight Philosophers of the Italian Renaissance* (Stanford, CA: Stanford University Press, 1964), p. 122.

15. Patrizi, *Nova de Universis Philosophie*, p. 115.

16. ‘Patritius ille, cum ratione insanire’, Johannes Kepler, *Astronomia Nova* (Prague, 1609) p. 2.

17. Skrbina, *Panpsychism in the West*, p. 19.

18. Edward B. Tylor, *Primitive Culture* Vol. 1, 4th edn (1871; London: John Murray, 1903), p. 129.

19. Franz Cumont, *Astrology and Religion Among the Greeks and Romans* (New York: G. P. Putnam’s Sons, 1912), p. 10.

20. Marc Edmund Jones, *Astrology, How and Why it Works* (1945; London: Routledge & Kegan Paul, 1977), p. 15; Dane Rudhyar, *The Astrology of Personality*, 3rd edn (1936; New York: Doubleday 1970), pp. 7–8.

21. Graham Harvey, *Animism: Respecting the World*, 2nd edn (2005; London: C. Hurst & Co, 2017), p. xxvi.

22. Harvey, *Animism*, p. 3, p. xvii.

23. Skrbina, *Panpsychism in the West*, p. 17.

24. I acknowledge that the term ‘rock’ would be at best a loose characterisation of the four gas giants Jupiter, Saturn, Uranus and Neptune, and the Sun (a star constituted from hot plasma).

25. René Descartes, *Principles of Philosophy*, in *The Philosophical Writings of Descartes, Volume 1*, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (1644; Cambridge University Press, 1985), p. 279 (Part Four, section 187 [314]).

26. Descartes, *Principles of Philosophy*, p. 247 (Part Two, section 64 [78]).

27. Galileo Galilei, *The Assayer* [*Il Saggiatore*], in Stillman Drake, trans. and ed., *Discoveries and Opinions of Galileo* (1623; Garden City, NY: Doubleday Anchor, 1957), pp. 237–38.

28. René Descartes, *Discourse on Method* (Part Four), in *The Philosophical Writings of Descartes, Volume 1*, trans. John Cottingham, Robert Stoothoff and Dugald Murdoch (1644; Cambridge: Cambridge University Press, 1985), p. 127 [32].

29. René Descartes, *Meditations on First Philosophy* (Meditation 6), in *The Philosophical Writings of Descartes, Volume 1*, trans. John Cottingham, Robert Stoothoff and Dugald Murdoch (1644; Cambridge: Cambridge University Press, 1985), p. 54, section 78.

30. Edward O. Wilson, *On Human Nature* (Cambridge, MA: Harvard University Press, 1978), p. 195.

31. C. D. Broad, *The Mind and its Place in Nature* (New York: Harcourt, Brace &

Company, 1925), p. 118.

32. Daniel C. Dennett, 'Illusionism as the Obvious Default Theory of Consciousness', *Journal of Consciousness Studies* 23, no. 11-12 (2016): pp. 65-72; Keith Frankish, 'Illusionism as a Theory of Consciousness', *Journal of Consciousness Studies* 23, no. 11-12 (2016): pp. 11-39.

33. Keith Frankish, 'The Consciousness Illusion', *Aeon* website 26 September 2019, at <https://aeon.co/essays/what-if-your-consciousness-is-an-illusion-created-by-your-brain> (accessed 28 March 2021).

34. Galen Strawson, 'The Silliest Claim', in *Things that Bother Me: Death, Freedom, the Self, Etc.* (New York: New York Review Books, 2018), p. 130.

35. The term 'wretched subjects' is an allusion to Otto Neugebauer, 'The Study of Wretched Subjects', *Isis* 42, no. 2 (June 1951): pp. 111, in which the author briefly explains 'why a serious scholar might spend years on the study of wretched subjects like ancient astrology'. Rene Descartes, *Meditations on First Philosophy* (Sixth Meditation [80]), trans. John Cottingham, in Rene Descartes, *The Philosophical Writings of Descartes*, Vol. II, trans. John Cottingham, Robert Stoothoff and Dugald Murdoch (Cambridge: Cambridge University Press, 1984), pp. 55-56.

36. Geoffrey Dean, assisted by Arthur Mather and 52 collaborators, *Recent Advances in Natal Astrology: A Critical Review, 1900 - 1976* (Subiaco, Western Australia: Analogic, 1977), p. 554.

37. Antonio Damasio, *The Feeling of What Happens* (London: Vintage/Random, 2000), p. 39; Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain*, revised edn (1994; London: Vintage/Random, 2006).

38. Damasio, *Descartes' Error*.

39. Werner Heisenberg, *Das Naturbild der Heutigen Physik* (*The Physicist's Conception of Nature*), trans. Arnold J. Pomerans (Hamburg: Rohwolt, 1955; London: Hutchinson Scientific and Technical, 1958), pp. 28-29.

40. Mary Midgley, *Science and Poetry* (London: Routledge, 2001), p. 84.

41. Robert H. Thouless, 'The Present Position of Experimental Research into Telepathy and Related Phenomena', *Proceedings of the Society for Psychical Research* 47, Part 166 (1942): pp. 1-19. In this first published reference to Psi phenomena, Thouless described it as 'a term proposed by Dr Wiesner' (p. 5). Psychokinesis was added to ESP as a component of Psi in R. H. Thouless and B. P. Wiesner, 'The PSI Processes in Normal and "Paranormal" Psychology', *Proceedings of the Society for Psychical Research* 48 (Part 174) (1947): p. 179.

42. Suitbert Ertel, 'Appraisal of Shawn Carlson's Renowned Astrology Tests', *Journal of Scientific Exploration* 23, no. 2 (2009): p. 134.

43. Stephen E. Braude, *The Gold Leaf Lady and Other Parapsychological Investigations* (Chicago, IL: University of Chicago Press, 2007), p. 173.

44. See for example, Lance Storm, 'A Parapsychological Investigation of the I Ching: Seeking Psi in an Ancient Chinese System of Divination', *Australian Journal of Parapsychology* 2, no. 1 (2002): pp. 44-62.

45. Rollo May, *The Cry for Myth* (New York: Delta, 1991), p.22 n.1; Thomas Moore, *The Re-Enchantment of Everyday Life* (New York: Harper Collins, 1996), p. 317.

46. Dane Rudhyar, 'The Birth Chart as a Celestial Message from the Universal Whole to an Individual Part' (talk given to the 1976 Convention of the American Federation of Astrologers), at <http://www.khaldea.com/rudhyar/astroarticles/celestialmessage.shtml> (accessed 6 June 2021). Earlier examples of the language analogy in Rudhyar's work occur at *Astrology of Personality*, p. 48; *From Humanistic to Transpersonal Astrology* (Palo Alto, CA: The Seed Center, 1975 [1972 as *My Stand on Astrology*, expanded for 1975 republication]), p. 26.

47. Nicholas Campion, 'Is Astrology a Symbolic Language?', in Nicholas Campion and Liz Greene, eds, *Sky and Symbol: The Proceedings of the Ninth Annual Conference of the Sophia Centre for the Study of Cosmology in Culture, University of Wales, Trinity Saint David, 4-5 June 2011* (Ceredigion: Sophia Centre Press, 2013), p. 45. Campion associated this problem particularly with the thought of the astrologer Dane Rudhyar.
48. Braude, *The Gold Leaf Lady*, p. 173.
49. David Hamblin, 'A Theory of How Astrology Works: The Planets as Conscious Beings', *The Astrological Journal* 62, no. 5 (September/October 2020): pp. 37–41.
50. Hamblin, 'A Theory of How Astrology Works', p. 39.
51. Hamblin, 'A Theory of How Astrology Works', p. 39.
52. Hamblin, 'A Theory of How Astrology Works', p. 39.
53. See, e.g., Philip Goff, *Galileo's Error: Foundations for a New Science of Consciousness* (London: Rider, 2019), pp. 161–69.
54. William James, *The Principles of Psychology* Vol. 1 (New York: Henry Holt and Company, 1890), p. 160.
55. Geoffrey Cornelius, *The Moment of Astrology*, 2nd edn (Bournemouth: Wessex Astrologer, 2003); Maggie Hyde, *Jung and Astrology* (London: Aquarian/Harper Collins, 1992).
56. Lindsay Radermacher, 'The Role of Dialogue in Astrological Divination' (MPhil dissertation, University of Kent, 2011), at http://www.cosmocritic.com/pdfs/Radermacher_Lindsay_Dialogue_in_Astrological_Divination.pdf [accessed 2 April 2021]; James Brockbank, 'The Responsive Cosmos: An Enquiry into the Theoretical Foundation of Astrology' (unpublished doctoral thesis, University of Kent, 2011). At http://www.cosmocritic.com/pdfs/Brockbank_James_Responsive_Cosmos.pdf (accessed 2 April 2021).
57. Alfred North Whitehead, *Process and Reality: an Essay in Cosmology* (Corrected Edition with corrections by David Ray Griffin and Donald W. Sherburne, eds) (1929; New York: The Free Press/MacMillan, 1978), p. 159.
58. Pierfrancesco Basile, *Whitehead's Metaphysics of Power: Reconstructing Modern Philosophy* (Edinburgh: Edinburgh University Press, 2017), p. 40.
59. William James, 'A Pluralistic Universe', in William James, *William James: Writings 1902–1910*, ed. Bruce Kuklick (1909; New York: The Library of America, 1987), p. 641.
60. James, 'A Pluralistic Universe', p. 644.
61. David C. Lamberth, *William James and the Metaphysics of Experience* (Cambridge: Cambridge University Press, 1999), p. 156. Cf Levinson's suggestion that 'Intimacy was the principle of order in James's hierarchy of universes from 1904 on', Henry Paul Levinson, *The Religious Investigations of William James* (Chapel Hill, NC: University of North Carolina Press, 1981), p. 192.
62. David C. Lamberth, 'Interpreting the universe after a social analogy: Intimacy, panpsychism, and a finite god in a pluralistic universe', in Ruth Anna Putnam, ed., *The Cambridge Companion to William James* (Cambridge: Cambridge University Press, 1997), p. 245.
63. 'Although pantheists differ among themselves at many points, they all agree in denying the basic theistic claim that God and the world are ontologically distinct'. H.P. Owen, *Concepts of Deity* (London: MacMillan, 1971), p. 65.
64. For a discussion of James's panpsychism, see David Skrbina, *Panpsychism in the West* (Cambridge, MA: MIT Press, 2005), pp. 145–49 and Lamberth, *William James and the Metaphysics of Experience*, pp. 185–96.
65. Lamberth, *William James and the Metaphysics of Experience*, p. 189 n.138.
66. John Macquarrie, *In Search of Deity* (London: SCM, 1984), pp. 52–53.
67. James, 'A Pluralistic Universe', p. 644.

68. James, 'A Pluralistic Universe', p. 645.
69. James, 'A Pluralistic Universe', p. 645.
70. Benedict De Spinoza, *The Ethics*, in: *The Chief Works of Benedict De Spinoza*, trans. R. H. M. Elwes (1677; New York: Dover, 1955), p. 74. James quoted this passage in 'Some Problems of Philosophy: A Beginning of an Introduction to Philosophy', in William James, *William James: Writings 1902 – 1910*, ed. Bruce Kuklick (New York, NY: The Library of America, 1987 [1911]) p. 1043 n.2.
71. James, 'Pluralistic Universe', p. 650. Original emphasis.
72. James, 'Some Problems', p. 1052. The numbering of the four points here follows James's text.
73. James, 'Some Problems', p. 1052.
74. James, 'Some Problems', pp. 1052–53.
75. Midgley, *Science and Poetry*, p. 45.
76. Midgley, *Science and Poetry*, p. 45. Original emphases.
77. Marsilio Ficino in Marsilio Ficino, *Commentary on Plato's Symposium on Love*, trans. Sears Jayne (Speech VI) (Woodstock CT: Spring, 1985), p. 127.
78. Damasio, *The Feeling of What Happens*, p. 42.
79. I should acknowledge that I am taking Ficino as a convenient figurehead for elements of Neoplatonic thought; a full comparative analysis from that perspective would have greatly increased the size of this paper.
80. Steven Pinker, *How the Mind Works* (London: Penguin, 1998), p. 561.
81. Albert Einstein; G. B. Jeffery and W. Perrett, trans., *Sidelights on Relativity* (London: Methuen, 1922), p. 28.
82. C. G. Jung, 'Synchronicity: An Acausal Connecting Principle' [1952], in C. G. Jung, *The Structure and Dynamics of the Psyche: Collected Works Vol. 8*, 2nd edn, trans. R. F. C. Hull (1960; London: Routledge, 1969), p. 478 [905].
83. It provides the title for chapter 10 of Hyde, *Jung and Astrology*, pp. 172–91, and appears repeatedly in Cornelius, *The Moment of Astrology*, p. 77, p. 222, p. 227, p. 299.
84. Brandon Carter, 'Large number coincidences and the anthropic principle in cosmology', in M. S. Longair, ed., *Confrontation of Cosmological Theories with Observational Data* (Dordrecht: Reidel, 1974), pp. 291–98.
85. Carter, 'Large number coincidences', p. 291.
86. Nick Bostrom, *Anthropic Bias – Observation Selection Effects in Science and Philosophy* (New York: Routledge, 2002), p. 6.
87. Stephen W. Hawking and Leonard Mlodinow, *The Grand Design* (London: Transworld/Bantam, 2010), p. 197. Original emphases.
88. Paul Davies, *The Goldilocks Enigma* (London: Penguin, 2006), p. 10.
89. Paul Davies, *The Goldilocks Enigma*, p. 262.
90. Rudhyar, *The Astrology of Personality*, p. 49.
91. Crystal Addey, 'The Connected Cosmos: Harmony, Cosmology and Theurgy in Neoplatonism', in Nicholas Campion, ed., *The Harmony Debates: Exploring a Practical Philosophy for a Sustainable Future* (Ceredigion, Wales: Sophia Centre Press, 2020) p. 144.
92. Addey, 'The Connected Cosmos', p. 144.
93. Marcus Manilius, *Astronomica*, ed. and trans. G. P. Goold (1977: Cambridge, MA.: Harvard University Press, 1997). p. 7 (Book 1, 34-7).
94. I discuss the idea of astrology as an agent of cosmic awe in more detail in chapters 6 & 7 of my doctoral thesis, 'Astrology and Truth: A Context in Contemporary Epistemology' (unpublished doctoral thesis, University of Wales Trinity St. David, 2020), at www.cosmocritic.com/pdfs/Phillipson_Garry_Astrology_and_Truth.pdf {accessed 2 July 2021}.

95. I allude here to the remark made by Niels Bohr to Wolfgang Pauli: 'We are all agreed that your theory is crazy. The question which divides us is whether it is crazy enough to have a chance of being correct'. Reported by Freeman J. Dyson, 'Innovation in Physics', *Scientific American* 199, no. 3 (September 1958): p. 80.

96. This is an allusion to the work of Michel and Francoise Gauquelin which suggested several such correlations including, most famously, that between the placement of Mars and a medical career. A summary can be found in Michel Gauquelin, *Neo Astrology: A Copernican Revolution*, trans. Stela Tomašević (London: Arkana, 1991).