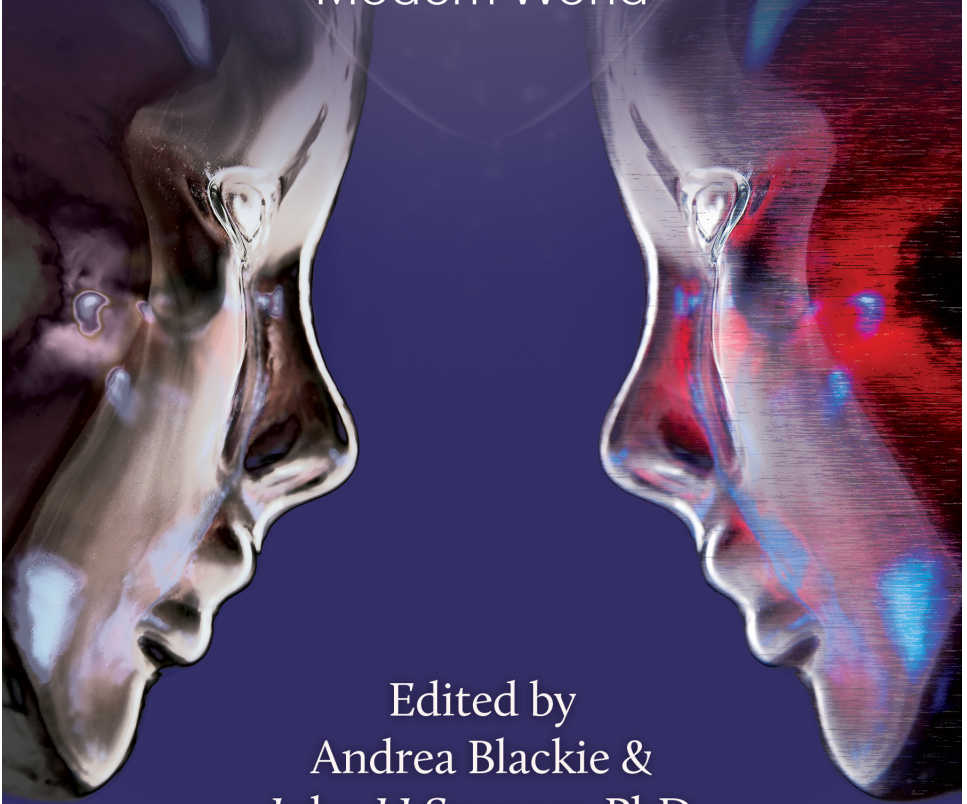


# THE BEACON<sup>OF</sup> MIND

Reason and Intuition  
in the Ancient and  
Modern World



Edited by  
Andrea Blackie &  
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Distributed by Waterfront Digital Press

ISBN: 978-0-9868769-6-7

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# Ancient Intuition — Modern Science

*NEOPLATONISM, ARCHETYPES, THE UNCONSCIOUS*

Many great scientists have acknowledged the importance of intuition in their work. Even Albert Einstein has said, “there is no logical way to the discovery of these elemental laws. There is only the way of intuition, which is helped by a feeling for the order lying behind the appearance” (Beveridge, 1957, p. 57). And Max Planck, the chief originator of quantum physics, was adamant that “imaginative vision and faith in the ultimate success are indispensable. The pure rationalist has no place here” (Beveridge, 1957, p. 55).

But the role of intuition and imagination in science should not surprise us, as it has played an indispensable guiding role in the process of many scientific discoveries, from Isaac Newton’s (1642–1727) recognition of universal gravitation, to John Dalton’s (1766–1844) formation of atomic theory, and Humphry Davy’s (1778–1829) chemical discoveries (Beveridge, 1957, p. 58; Davy, 1858, p. 315; Spencer, 2012, chs. 2, 5). In these and many other cases, the history of science proves the importance of intuition in its major conceptual revolutions, and therefore as scientists we should be applying intuition more consciously, and as teachers we should be training future scientists to use their intuition. Fortunately we have a model of how these goals may be achieved in Platonic philosophy, especially in its later development, called *Neoplatonism*. Plotinus (c.204–270) originated this phase of Platonic thought, which understands reality as the emanation of an ineffable first principle, and which teaches psychospiritual practices for participating in this process of emanation.

Essential to Platonic philosophy are the *Platonic Ideas* or *Forms*, which are transcendental in the sense of being eternal, non-arbitrary, common to all people, and prior to individual experience. (Contrasted with them are the many ad hoc and conventional concepts we acquire by experience from the physical world and our culture, such as *computer, weed, pet, bicycle, garden*.) Many Platonic Ideas are mathematical; for example, geometrical concepts such as triangle, circle, and line,

and arithmetical concepts such as number, magnitude, ratio, and continuity. Behind these, Plato identified further abstract ideas, such as unity and multiplicity, limit and the unlimited, identity and difference, stability and change. Other Platonic ideas include symmetry, harmony, beauty, life, being, and mind. Principles such as these — and more specific laws, which are mathematical in form — govern our universe, and therefore the emergence and evolution of everything in it. In Neoplatonism, the forms are not only transcendent but also immanent in the material world as formative principles. In other words, the laws of nature exist as timeless, abstract mathematical relationships (for example, the inverse square law), but they also govern specific physical processes (e.g., the orbit of the moon around the earth, and the earth around the sun). We see only the sensible effects of these principles, but we can grasp their source by our faculty of intuitive understanding (which Platonists call *nous*).

Neoplatonists distinguish several degrees of reality, and despite various esoteric and technical disagreements, they generally adhere to the basic brief distinctions I will outline here. Between the sensible world and the realm of the Platonic forms is the cosmic soul (*anima mundi*), which is necessary to bring the eternal, timeless forms into the world of time and space as causes of motion and change; it is the *animating principle*, the cause and governor of orderly natural processes. Beyond the realm of the forms is *the ineffable One*, the unifying principle of everything, the principle by which anything, including the cosmos as a whole, is what it is. In traditional terms, the degrees of reality are, in order, the One, the cosmic mind (which contains the Platonic Ideas), the cosmic soul (which brings them to life), and the cosmic body (the sensible world).

### **Neoplatonism in the History of Science**

It is no coincidence that Neoplatonism played an important role in the development of modern science (MacLennan, 2007; Spencer, 2012, ch. 2). Since the thirteenth century, the dominant European cosmology had been Thomas Aquinas's (1225–1274) Christianization of Aristotelian cosmology and Ptolemaic astronomy. This placed a “fallen” earth

in the center of the universe (with Hell at the earth's center), surrounded by progressively more heavenly spheres, with God as prime mover residing outside them (Easlea 1980, pp. 43, 57–8). Early scientific investigations challenged the Thomistic-Aristotelian cosmology. For example, Galileo's (1564–1642) observation of mountains on the moon suggested that the heavens were not so perfect as supposed. Also, the investigations of Nicolaus Copernicus (1473–1543) and Johannes Kepler (1571–1630) suggested that the earth moves around the sun, and not vice versa. By the time the weaknesses in the Thomistic-Aristotelian system had reached the breaking point, Europe had rediscovered Platonism, largely through the Latin translations of Marsilio Ficino (1433–1499), the head of the Platonic Academy in Florence.

Especially inspirational, and broadly consistent with a Neoplatonic worldview, were the *Hermetica* (also translated by Ficino), the writings attributed to Hermes Trismegistus and therefore purported to be of enormous antiquity. Hermeticism, which viewed the universe as a unified whole animated by a world soul, emerged as a possible successor to the Thomistic-Aristotelian cosmology. But it had a competitor, the emerging *mechanical philosophy* advocated by Rene Descartes (1596–1650) and Pierre Gassendi (1592–1655), and the two competed as a basis for modern science as it developed in the sixteenth and seventeenth centuries. These philosophies had in common an appeal to invisible causes to explain visible phenomena. The mechanical philosophy appealed to material properties, such as shape, position, and motion, whereas Hermeticism appealed to archetypal ideas and hidden, animating forces. As a consequence, the mechanical philosophy viewed the material world as largely inanimate and soulless, with the exception of humans and angels, thus separating humans from the rest of nature. The natural world was viewed as a resource that could be exploited by this new “masculine philosophy” (as it was called). In contrast, Hermetic philosophers viewed Nature as a divine emanation, an embodiment of the cosmic soul, more an object of veneration than of exploitation. (For more, see Easley, 1980, and Hadot, 2006.)

In the end, the mechanical philosophy won out, in that it became the de facto worldview of the emerging scientific establishment and has

provided the model for most of the subsequent development of science. In part this was due to its success in practical applications and the exploitation of natural resources. Nevertheless, Hermetic, Neoplatonic, and Pythagorean insights have played a crucial role in several major discoveries. For example, in a symbolically significant structure, the traditional Thomistic-Aristotelian cosmology had earth at its center, with fiery Hell, the epicenter of evil, within; Heaven, the source of goodness was placed as far apart from earth as possible. Nicolaus Copernicus, in contrast, placed the fiery sun in the center of the universe, and attributed the idea to Pythagoras, for the Pythagoreans spoke of a central fire, not as the epicenter of evil, but as a source of vitality, and of the sun as a visible manifestation and symbol of the ineffable One. These two viewpoints have vastly different valuations of both earth and nature. Since earth and nature were traditionally feminine and were contrasted with heaven and God (traditionally masculine), the mechanical philosophy conformed to a societal devaluation of the feminine and laid the spiritual foundations of our ecological crisis (Easlea, 1980, ch. 2; Merchant, 1980).

The paradigm for mathematical physics and astronomy was established by the Pythagorean account of consonant musical intervals in terms of the ratios of small integers (measuring, for example, the lengths of strings), which thereby reduced a mysterious sensible quality to mathematical principles. In particular, the tuned string and the musical scale became exemplars for all explanations of harmony in the universe (as they are in Plato's dialogue called the *Timaeus*). These are especially prominent in the work of Robert Fludd (1574–1637), a physician and one of the principal Hermetic philosophers. He engaged Kepler (1571–1630) in a protracted argument, for Kepler objected to his concept of a harmonious universe animated by a cosmic soul (Yates, 1964, ch. 22). Nevertheless, Kepler proposed a mathematical cosmology based on the Platonic solids and inspired by the Pythagorean notion of the music of the spheres; he was also deeply influenced by the Neoplatonic philosopher Proclus (411/12 – 485) (Siorvanes, 1996; Spencer, 2012, pp. 45, 48–50, 111).



Likewise, Newton divided the spectrum, revealed by passing white light through a prism, into *seven* colors, because he was convinced there was a hidden structure common to light and the diatonic scale in music. Newton, who was also an alchemist, Hermeticist, and theologian, was unable to account for the motion of the planets and falling objects without postulating an “occult force” — gravity! — but because such forces were anathema to mechanical philosophers, who denied action at a distance in favor of direct contact, he was obliged to declare that he made no hypotheses about occult forces, and thus left his laws of motion without explanation. Moreover, he thought that Pythagoras’s harmonic theory had anticipated his inverse-square law (White, 1997, pp. 348–9).

Because Hermeticists believed in hidden causes and in nonmaterial archetypal forms, they realized that they could not penetrate the mysteries of the universe with their unaided rational minds. They needed insight and intuition into the hidden sympathies and correspondences of nature to formulate hypotheses and experiments to test their hypotheses. This is why, for example, the foundations of pharmacology were laid by Paracelsus (1493–1541), a Hermeticist and alchemist (Easlea, 1980, pp. 100–3; see also Webster, 1982). Rational analysis was necessary but limited, and so if your goal was to cure patients, you had to make bold conjectures and then test them. This process of conjecture and experiment became an essential part of modern science, but many (if not most) scientists have forgotten its Hermetic, alchemical, and Platonist roots, roots which are still essential today.

One notable dissenter from the mechanical philosophy was Johann Wolfgang von Goethe (1749–1832), author and devotee of alchemy, who developed an empathetic, participatory, and holistic scientific methodology, in contrast to mechanical philosophy, which tended to be analytic, observational, and reductive (Bortoft, 1996, pp. 3–26, 49–76, 321–30; Goethe, 1996, pp. 12, 22, 28, 41, 48; Pauli, 1955, pp. 205–6). He called it a “delicate empiricism” (*zartre Empirie*, Goethe, 1996, ch. 5), and I will have more to say on this subject later.

## Neoplatonism, the Unconscious, and Aesthetics

By means of our intuitive grasp of the Platonic ideas, we are better able to understand the inner life — the soul — of the universe. The techniques for this intuitive access are what future scientists need to learn and what ancient Neoplatonists taught. The approach is *phenomenological*; that is, it takes the interior world seriously and studies it objectively. Observation requires an observer and all observations manifest in consciousness; thus all external evidence is ultimately interior.

Further, because understanding is a mental activity and hence is constrained by the structure of the mind, an investigation of the psyche — that is, psychology — is fundamental to comprehending science and to training scientists. However, the changing content of consciousness is strongly affected by the unconscious mind, as shown by modern psychologists, but also well known to ancient Platonists (Schwyzer, 1960; Whyte, 1978, p. 79); for example, Plotinus (204–270 CE) has been called the first philosopher of the unconscious.

Moreover, scientists and non-scientists alike have identified the unconscious as the source of creative inspiration (Dorfman et al., 1996; Fritz, 1980; Gedo, 1997; Hadamard, 1945; Kipling, 1937/1952; Kris, 1952; Neumann, 1971; Poincaré, 1908/1952, 1929). This is because the archetypal ideas reside in the *collective unconscious*, as described by Carl Jung (1875–1961), the founder of *analytical psychology*, who inaugurated the psychological investigation of the archetypes and the collective unconscious. It is *collective* because it is common to all people and thus independent of the observer; therefore Jung also called it the *objective psyche* (Fordham, 1951; Jung, CW 7, ¶103n; Stevens 2003, p. 65). It is *unconscious* because we do not have direct access to the archetypes, but experience only their effects in consciousness. The practical result is that access to the Platonic Ideas coincides with access to the archetypal ideas in the objective psyche, but we must use specific techniques (known to both analytical psychologists and ancient Neoplatonists) to accomplish this.

The Nobel-prize-winning physicist Werner Heisenberg (1901–1976), who discovered the famous Uncertainty Principle, observes that thinkers as diverse as Kepler, Jung, and Wolfgang Pauli (1900–1958)

have attributed scientific insight “to innate archetypes that bring about the recognition of forms” (Heisenberg, 1974a, pp. 177–80). For example, Pauli, one of the founders of quantum physics and a Nobel Prize laureate, argues that the archetypes, which connect sense perceptions to the world of ideas, are necessary to the formulation of any scientific theory of nature (Pauli, 1955, p. 153).

Analytical psychologists and Neoplatonists agree that symbols provide the connection between the sensible and archetypal realms. The unconscious communicates with the conscious mind by means of symbols (especially in dreams), and symbols can activate archetypes, which is why symbols may be numinous, hinting at unseen, eternal truths. Neoplatonists put the same idea in their own terms: each archetypal idea or form is the origin of a series of emanations or a line of descent, which has manifestations in each level of reality. The sensible manifestations are symbols (*symbola*) or tokens (*synthēmata*) that can be used to approach the archetypes that are their origins. Therefore, symbols have an essential role in our access to the archetypes.

It should not be surprising that Neoplatonism has much in common with contemporary analytical psychology, since Jung acknowledged drawing inspiration from Neoplatonism and from Gnosticism, which has close connections to the Platonic worldview (Jung, 1963, p. 162). Indeed, he borrowed the term “archetype” from Neoplatonic and Hermetic texts (Jung, CW 9 i, ¶5). Analytical psychology may be considered the phenomenological complement to evolutionary psychology (MacLennan, 2006; Stevens, 2003), which studies the inherited, species-wide behavioral adaptations of *Homo sapiens*. These behavioral adaptations are often called “instincts,” and indeed Jung associated the archetypes with instincts (CW 8, ¶404), but instincts have both interior and exterior aspects. On one hand, we can observe the characteristic behavior of *Homo sapiens* from the outside, and seek to understand it in terms of the structure of the nervous system, and that in terms of more fundamental biological and physical principles. On the other, we can use phenomenological techniques to study the instinctual psyche from the inside, to discover the psychological structure of the collective unconscious (the mental aspect of human behavioral adaptations). As

we probe ever deeper into the objective psyche, we discover that “the biological instinctual psyche, gradually passes over into the physiology of the organism and thus merges with its chemical and physical conditions.” (Jung, CW 8, ¶420). One of Jung’s colleagues, Marie-Louise von Franz (1915–1998), who explored this unity of the mental and material worlds, wrote, “The lowest collective level of our psyche is simply pure nature” (1974, p. 7). Jung emphasized that the archetypes are not static images, but dynamic forms governing the psyche: “active living dispositions, ideas in the Platonic sense” (Jung, CW 8, ¶154). When they are activated by external or internal stimuli, they can manifest externally in overt behavior, but also internally by conditioning perception, affect, and motivation toward biological ends. Their goal is life and its evolution.

Since the function of many of the archetypes is to govern specifically human behavior, they are personified (the archetypal mother, father, child, hero, seducer, trickster, clever maiden, etc.), and they are experienced as invisible personalities intervening in our lives; that is, as gods, whose complex interrelations are expressed in the myths of many nations. Zeus, Hermes, Aphrodite, Ares, Artemis, Apollo, Athena, and the rest are with us to this day (MacLennan, 2003).

As these universal archetypes are activated, they acquire personal unconscious associations, which adapt them to our individual lives. In psychological terms, they self-organize into unconscious *complexes*, which (as Jung stressed) behave as autonomous subpersonalities. Indeed, Jung and other analytical psychologists occasionally call them *daimones* (singular: *daimôn*), a term that in Neoplatonism refers to autonomous psyches mediating between our conscious selves and the archetypal gods. As such, they are located in the cosmic soul, which connects the Platonic forms to the sensible world.

It is perhaps surprising that Neoplatonic philosophical practice does not contradict contemporary science, but rather complements and completes it. To the external observation and exploration of ordinary science it adds the interior observation and experiment of analytical psychology. Further, to action in the outer world, it adds action in

the interior world, as practiced in analytical psychology and Neoplatonism, to engage the archetypal ideas. As Pauli notes, it opens the way toward “a future description of nature that uniformly comprises physis and psyche” (i.e., exterior and interior reality), for which “it appears to be essential to have *recourse* to the archetypal *background of scientific terms and concepts*” (Pauli, 2001, p. 180, emphasis in original). Indeed, Pauli argues that in the future, the only acceptable scientific theory will be “the one that recognizes both sides of reality—the quantitative and the qualitative, the physical and the psychical—as compatible with each other, and can embrace them simultaneously” (1955, p. 208).

To accomplish these goals, the integrated whole person must be involved in discovery, including the unconscious as well as the conscious mind, and aesthetic as well as rational judgment. Scientific pioneers have noted the importance of aesthetics in science. For example, Heisenberg (1974b, p. 175) remarks that an aesthetic response to the whole often precedes scientific investigation of the details: “How comes it that with this shining forth of the beautiful into exact science the great connection becomes recognizable, even before it is understood in detail and before it can be rationally demonstrated?” It is not a result of conscious analysis, for “[a]mong all those who have pondered on this question, it seems to have been universally agreed that this immediate recognition is not a consequence of discursive (i.e., rational) thinking” (1974b, p. 177). He contrasts immediate, self-evident awareness (Grk. *epistêmê*) with deliberative, logical analysis (Grk. *dianoia*) (1974a, p. 137).

The coincidence of scientific truth and beauty has deep historical roots. Heisenberg (1974b, pp. 169–70) mentions Pythagoras’ identification of harmonious musical intervals with simple arithmetical ratios, a discovery of immaterial form as the cause of sensible properties, “which later provided the foundation for all exact science” (p. 170). “Beauty is truth, and truth beauty,” as the English Romantic poet John Keats (1795–1821) said, and therefore the cultivation of the aesthetic sense should be an essential part of the education of all scientists — indeed, part of everyone’s educational experience. Similarly, aesthetic

considerations should complement scientific accuracy in the presentation of scientific results and knowledge. The well known mathematical physicist, Sir Roger Penrose, also observes, “Beauty and Truth are intertwined, the beauty of a physical theory acting as a guide to its correctness in relation to the Physical World” (2004, p. 1029).

In Neoplatonism, Truth and Beauty are two fundamental aspects radiating forth from the One (the originating and governing principle of everything); the third is Goodness (Siorvanes, 1996, pp. 192–3), as Penrose also acknowledges (p. 1029). The three can and should accompany one another in our education.

### **Contemplative Practices**

We can create a more holistic science by making appropriate contemplative practices for intuitively grasping the archetypal forms an accepted and expected part of the scientific enterprise. In the remainder of this chapter, I will describe briefly some of these practices, which can be found in the Neoplatonic tradition (see my *Wisdom of Hypatia* for more information).

Theory comes from contemplation (*theôria* in ancient Greek). By contemplating the phenomena and by experiencing the archetypal patterns of form and change that are consequently activated, a scientist can gain insight into the inner workings of nature, which can be translated into mathematics and testable theories. This is what Goethe did in his morphological contemplations, which led to his 1784 discovery of the human intermaxillary bone, an observation that supported the evolutionary continuity of humans with other animals (Goethe, 1995, pp. 111–16). Goethe’s thinking was steeped in the archetypal symbolism of alchemy (e.g., *The Golden Chain of Homer*, Bacstrom, 1775/1983, and the works of Paracelsus), which also inspired Jung (CW 9 ii; CW 12–14).

We, too, can contemplate archetypal symbols to gain new insights and perspectives. Some archetypal symbols are traditional, such as mandalas, but new ones are created every day as contemporary expressions of the eternal archetypes. They are not limited to static images,

but include texts and sounds, and may evolve in time according to archetypal patterns (thus echoing the deep structure of many myths). Jung emphasized that the archetypes are *dynamic* forms, and therefore dynamic, active symbols are the best way to activate them. Indeed, ritual has been defined as “symbolic behavior, consciously performed” (Johnson, 1986, p. 102), and the laboratory operations of the alchemists, for example, can be considered rituals of spiritual transformation. We, too, can enact laboratory procedures contemplatively to engage the archetypal patterns. Moreover, by experiencing the living archetypes within ourselves, we acquire an embodied, participatory understanding of the phenomena, which was Goethe’s scientific method (Bortoft, 1996, pp. 22–3, Pt. III, ch. 5; Goethe, 1996, ch. 7; Heisenberg, 1974a). Through contemplative exercises, we can learn to live the inner life of the phenomena we are trying to understand. An ancient Pythagorean principle is *like knows like* (e.g., Empedocles, fr. 109; Aristotle, *Met.* 1000b7, *De An.* 404b16; Sextus Empiricus, *Adv. Math.* VII.92); in this way, we understand the archetypes by grasping them within ourselves.

One possible consequence of a scientific approach that is participatory rather than detached would be a greater reverence for Nature, which was more common among those early-modern philosophers influenced by Neoplatonism, but disparaged by the early advocates of the mechanical philosophy. Our respect for other human beings is grounded in part in our empathetic understanding of them; we can put ourselves in their place. We may have greater respect for the rest of Nature by participating in the archetypal forms that govern its life.

Dreams and reveries are also important forms of inspiration, and many relevant examples of this can be gleaned from the history of science. For example, the chemist August Kekulé (1829–1896) discovered the structure of the benzene ring after he had a vision, in a reverie, of an *ouroboros*, the familiar, archetypal image of a serpent biting its tail. He recommended such reveries as a method, saying to his fellow scientists, “Let us learn to dream, gentlemen, then perhaps we shall find the truth” (Kekulé, 1890, tr. in Benfey, 1958). Ancient philosophers also paid attention to dreams, but they couldn’t always wait for a relevant

dream to arise spontaneously. Therefore, they taught incubation, which is an ancient way of encouraging “big dreams,” that is, dreams charged with archetypal significance, and in science such dreams can provide new insights or hypotheses. In brief, the technique begins with preparation when awake: contemplation on the problem, but also the more familiar sort of hard, rational work. The next step is to arrange an appropriate *set* (attitude) and *setting* (physical environment), such as an attitude of expectancy and anticipatory gratitude, perhaps combined with devotional activities (e.g., a petition to your scientific muse). The next step is to go to sleep with the problem in mind, but without struggling with it. As the ancients tell us, a dream might not come on the first night, and you might need to repeat the procedure. You can also cultivate the states between waking and sleeping, when you’re just nodding off (*hypnagogia*) or before you have fully awakened (*hypnopompia*). Finally, it is important to keep a dream journal and to analyze significant dreams in terms of what the symbols mean to you (i.e., trusting your own archetypal intuition). (See Johnson, 1986, Pt. II, for suggestions from the perspective of analytical psychology.)

In the ancient world, dream incubation was considered a method of divination; that is, of obtaining guidance from the archetypal realm. Other methods of divination can also be useful as a means of generating new hypotheses grounded in archetypal understanding. It is well known that Jung used the *I Ching*, and Pauli also found insights in its mathematical structure (Lindorff, 2004, pp. 99–109; Miller, 2009, p. 224). Common approaches to creative problem solving use a form of *bibliomancy* (divination by books), in which a book is opened at random and the first word seen is applied to the problem. More generally, we may employ divinatory techniques that use archetypal images and mathematical structure to suggest hypotheses that can be subsequently subjected to theoretical analysis and experimental verification.

Since many of the archetypes and complexes are personified and act as independent subpersonalities (Jung, CW 8, ¶253), it is possible to communicate with them directly. In modern analytical psychology, the process is called *active imagination* (Johnson, 1986; Jung, 1997); in ancient Neoplatonism it was called *conjunction* or *alliance* (Grk. *systasis*),



and Pauli applied it regularly as well (Lindorff, 2004, p. 101). The basic technique is to invoke an archetypal figure, activating the archetype by means of any symbols associated with it. You then remain in a state of calm expectancy until there is some (perhaps subtle) sign of quickening in the environment, indicating activation of the archetype. Then, begin the conversation with that archetype. When it is done, dismiss the archetype respectfully, and consciously involve yourself in some other activity to bring the experiment to a definite conclusion. You might worry that you are making it all up, but unless you are consciously scripting the dialogue, you will probably be surprised at the direction it takes. For inspiration in writing or hypothesis formation, one especially important archetypal figure to contact is your muse, which usually has the opposite gender from your own (in psychological terms, the *anima* in a man, the *animus* in a woman). It is also important to engage the archetype that Jung called the *shadow*, which can be helpful in clearing emotional and mental blocks and in becoming more balanced psychologically. (A complete discussion of the techniques is not possible here due to considerations of length; for more on this topic, please see the bibliography) (Johnson, 1986, Pt. III; MacLennan, 2013, ch. 12)).

The Neoplatonic perspective and practices have wider implications than in scientific method, for scientists are, after all, human beings, and the archetypal ideas are no less relevant to their lives outside science. As people, they will live better lives if they understand the archetypal forces that regulate their lives, and if they actively engage with these forces. To this end, we can all practice modern versions of Neoplatonic spiritual exercises (MacLennan, 2013) and other kinds of active imagination (Johnson, 1986; Jung, 1997). These practices can help us to pursue the lifelong process of *individuation*; that is, of becoming a psychologically integrated person. This developmental process is especially important in the second half of life, when the integration of the unconscious and its archetypes into consciousness provides a context for understanding and fulfilling the purpose of your life, but it can be useful at any age (Jacobi, 1967, pp. 7–11; Stevens, 2003, p. 173).

## Conclusions

If, through these practices, science returns to its Pythagorean and Platonic roots (understood within a contemporary context), we may hope that its worldview will become more balanced, comprehensive, and integrated, encompassing the psychical as well as the physical, as Pauli urged. The result for individual scientists will be not only a deeper understanding of reality, but also better-integrated personalities. The eventual consequences for society at large, as it absorbs this new scientific worldview, will be a more balanced and harmonious culture.

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