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► **To cite this version:**

John Michael Chase. Which School of Ancient Greco-Roman Philosophy is Most Appropriate for Life in a Time of COVID-19?. *Eidos: A Journal for Philosophy of Culture*, 2021, 5 (1), pp.7-31. 10.14394/eidos.jpc.2021.0002 . hal-03506839

HAL Id: hal-03506839

<https://hal.science/hal-03506839>

Submitted on 2 Jan 2022

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Which School of Ancient Greco-Roman Philosophy is Most Appropriate for Life in a Time of COVID?¹

The ordering (Ordnung) of reality we seek must rise from the objective to the subjective. It must therefore begin with a part of reality which we can posit as being completely external to us (...) but at the summit of the ordering are, as in Goethe's sketch, the creative faculties, by means of which we ourselves transform the world and give it form (...) one must constantly be aware that the reality of which we can speak is never reality "in itself" (*an sich*), but only a *known* reality, or even, in many cases, a reality to which we ourselves have given form".

Werner Heisenberg, *The Ordering of Reality* (1942)².

In his studies of ancient philosophy, Pierre Hadot often emphasized that part of the wealth and value of ancient Greco-Roman philosophy was its variety. As Nietzsche pointed out³, the six main philosophical schools⁴ of the Classical and Hellenistic period – Platonism, Aristotelianism, Stoicism, Epicureanism, Cynicism and Scepticism – constitute "experimental laboratories" of human experiences, and the sometimes lacunary accounts of their doctrines and practices that have come down to us today contain a wide variety of potential answers to many questions that still concern us. In fact, Hadot argued, these various schools largely correspond to different personality types: persons inclined to give importance to duty, vigilance and moral uprightness may be attracted toward Stoicism, for instance, while those who value relaxation, easy-going conversations with friends and loved ones, and the simple pleasures of life may be more inclined toward Epicureanism. For Hadot⁵, this approach justified a certain eclecticism when it comes to deciding which ancient philosophical doctrines may be applicable to and useful for life today: as long as they are not overtly contradictory, he argued, there is nothing to stop us from

¹ Research for this paper was carried out while I was Visiting Scholar in the Research Group "Experience in the Premodern Sciences of Soul & Body ca. 800–1650" at the Max Planck Institute for the History of Science, Berlin, September to December 2020. I thank the Group Leader, Dr. K. Krause, for her kind hospitality and the very helpful discussions we had on the subjects discussed here. Thanks also to the friendly and efficient staff of the Institute Library. Previous drafts of this article have benefitted from the learned comments of Matyáš Havdra, Emidio Spinelli, and Stephen Cooper, whom I warmly thank. All errors and distortions that remain in this paper, despite their best efforts, are my fault. All translations are my own, unless otherwise indicated.

² Cf. Kleinknecht et al., eds., 2019, p. 58-60. For an exemplary study of this work, emphasizing Heisenberg's proximity to the later Wittgenstein, perhaps through the intermediary of the thought of Niels Bohr, cf. Chevalley 1998. This author notes (p. 187-188) that for Bohr, "the purely pragmatic character conferred [by Bohr – MC] on the division between subject and object – which remains the precondition for any 'univocal description' – (...) renders fictional the traditional separation between sciences of the objective and sciences of the subjective". Pierre Hadot was, of course, one of the first thinkers in France to become interested in the thought of Wittgenstein; cf. Hadot 2004.

³ Nietzsche, KSA 9:[15] 59, p. 654. Cf. Hadot 2002, p. 277.

⁴ It is questionable whether Scepticism and Cynicism can really be called "schools", since they had no institutional headquarters or structure, and the same can be said of medical Empirism, which we will discuss below. This is one of many simplifications I will allow myself in what follows. Such blithe bypassing of controversial issues may outrage professional historians of philosophy, but I believe it is justified and necessitated by the practical orientation of this article, which is not intended to make a substantial contribution to the history of philosophical Scepticism, but rather to make tentative recommendations for the present.

⁵ Hadot 2011, 102-103; 182-183.

adopting elements from several competing schools. Here as elsewhere, fundamentalism and sectarianism are counter-productive, and are to be avoided.

I do not recall, however, that Hadot ever entertains the idea that the teachings of some ancient philosophical school may be more appropriate, efficacious, or well-adapted to specific periods of history or historical situations. Might it be the case, for instance, that one ancient philosophical school could be more appropriate than others for the task of confronting life in the times of the SARS-COVID-19 pandemic?

In this contribution, I would like to adopt this proposition as a working hypothesis. The question then becomes, of course, which ancient philosophical school is the best candidate for today? If we further assume the ancient metaphor of philosophy as therapy⁶, then at least two further steps are called for. The first is a diagnosis of the current situation, the second a suggestion for the most promising treatment.

The diagnosis. 1, The epidemiological crisis and what to do about it

We are now living in the midst of at least two pandemics: one, of a physico-epidemiological nature, is the SARS-Cov-2 pandemic, which has caused more global disruption than any health crisis over the past century. Here, it is necessary to take into account the basic Stoic distinction between what does and does not depend on us⁷: to avoid unnecessary distress and promote effective action, we must concentrate on the former category and worry as little as possible about the latter. Now that the COVID virus is upon us, the actual physical processes at work in the pandemic – its modalities of propagation, virulence, and the determination of what measures adopted to palliate its devastating effects – are, to a large extent, beyond our control, although the observation of these measures is a matter of urgent ethical necessity. As I have argued elsewhere⁸, however, the causes of the current COVID pandemic cannot be separated from the damage human beings have inflicted on the environment, at increasingly catastrophic rates, over the last half-century or so, through greenhouse gas emission, deforestation, fossil fuel consumption, the inequitable global distribution of resources, non-sustainable practices of food production, etc., etc. To a very large degree, the COVID pandemic is a mere symptom of these underlying disorders, and of our unsustainable attitude to Nature and the environment of which they are the reflection. COVID was not the first pandemic and it will not be the last, unless we have the courage, as a global community, to change the way we live. In that sense, although the *present* existence of SARS-COVID 19 pandemic is a fact which no longer depends on us, and decisions concerning how best to deal with it are best left up to doctors, epidemiologists, and virologists, the *future* existence of pandemics is very much up to us.

⁶ See Voelke 1993, with P. Hadot's Preface, p. vii.xiv.

⁷ Hadot 1998, 83ff.; 114ff.

⁸ Chase 2020, to which the present article is intended as a companion piece. Among the important works that came to my attention after I had completed this article, cf. Bauer 2020, pp. 92ff.; Avray 2020 (a work which contains important analyses of the genesis of the pandemic, but tends to underestimate its seriousness as a threat to health, and therefore advocates erroneous, and sometimes dangerous policies – or rather, lack of policies – to deal with it).

The origins of COVID and our attitude to nature

In an ambitious work on the origins and history of the Western concept of Nature (Hadot 2006), Pierre Hadot distinguished two fundamental attitudes. One, which he called the Promethean attitude, has long been the reigning paradigm in the West: it consists in regarding nature as an objectified Other standing opposite to, and useful only to satisfying the needs of, modern humankind as subject. Often allied with the theological view that Nature was created for the sake of humankind, and/or that she jealously conceals her secrets, this attitude authorizes and encourages the view that Nature, as an inanimate, limitless reservoir of resources, is to be exploited without qualms. Her secrets are to be extracted from her by means of interventionist, experimental science, often likened to torture. Proponents of such a view will, in Hadot's words, "seek, through technology, to affirm [their] power, domination, and rights over nature⁹."

Hadot designates the alternative approach to nature as "Orphic". Here, instead of regarding her as a reified Other that serves only to satisfy our desires and perceived needs, Nature is perceived as an autonomous subject, with which human subjectivity is intimately linked in a relation of part to whole. Here, the appropriate human attitude is no longer envisaged as one of aggressive intervention and exploitation, but as one of respectful contemplation: rather than torturing Nature to make her reveal her secrets, one observes and listens to her in the hope of learning from her, so that humankind can imitate at least some of the wisdom embodied in her processes and accumulated over eons of time. As Hadot writes,

"Whereas the Promethean attitude is inspired by audacity, boundless curiosity, the will to power and the search for utility, the Orphic attitude (...) is inspired by respect in the face of mystery and disinterestedness¹⁰".

The Orphic attitude is, in short, one of respect for what Nietzsche called "nature's modesty"¹¹. I suggest that it is this attitude we must adopt and implement if we wish to forestall the arrival of future pandemics and avoid the other environmental disasters that currently threaten the well-being, and even the survival, of human life on Earth¹².

⁹ Hadot 2006, p. 92.

¹⁰ Hadot 2006, p. 96.

¹¹ Nietzsche, *Die fröhliche Wissenschaft, Vorrede zum zweiten Ausgabe*, sect. 4, KSA vol. 3, p. 352, 16ff: "One should have more respect for the modesty (Scham) with which nature has hidden herself behind enigmas and variegated uncertainties", translation Kaufmann, p. 38, modified.

¹² To invoke my personal experience: southern Vancouver Island, where I have my home and where I am writing these lines, is one of the most glaring examples of the disastrous consequences of the Promethean attitude. The Island was originally home to vast temperate rain forests populated, among other species, by Coastal Douglas Fir, trees which can live up to 1400 years and reach heights of nearly 100 meters. According to some estimates, only 0.8 % of the original old growth in the province of British Columbia currently remains (<https://www.cbc.ca/news/canada/british-columbia/old-growth-forest-b-c-estimates-1.5597838>, consulted Dec. 27, 2020), the rest having been logged, usually by barbarous methods of clearcutting. Not only does the destruction of this and other Old Growth forests release greenhouse gases and thereby contribute to climate

Aspects of the Corona-Crisis that *do* depend on us

What *does* depend on us, in the current situation, are, of course, our personal psychological, emotional, and attitudinal reactions to this situation that is now partially beyond our control. Here, our choice of an ancient philosophical model must be governed by how well it enables us to cope with the largely unprecedented problems raised by COVID, including fear, isolation, loneliness, economic hardships, disruption of plans, and restrictions on personal freedom. Here, many of the spiritual exercises of ancient philosophy, well described by Pierre Hadot, can be of assistance. These might include the Platonic and Cynic View from Above¹³, in which we embark on an imaginary flight above our local surroundings and view them from a distance, thus enabling us to relativize our current problems and put them back into perspective; Stoic-Epicurean concentration on the present moment and the infinite riches it contains¹⁴; the Stoic method of physical definition, circumscription and analysis of problems into their constituent elements¹⁵, with the corresponding realization that each such element is bearable; Epicurean reflections on the finite limits of the experience of pain¹⁶ and the fact that death is perhaps not as terrible a phenomenon as we think¹⁷; the Platonic, Stoic, and Aristotelian emphasis on the important of adhering to virtue; Epicurean considerations on the vital importance of friendship¹⁸ and the distinction between genuinely satisfying and non-necessary desires¹⁹, and so on. All these philosophical schools, and their doctrines, have their advantages and drawbacks as far as their relevance to modern life is concerned. Above all, as Hadot has emphasized, they must be updated in order to be made relevant to life in the 21st century: that is, they must be separated from the outdated elements they contain, in which we no longer believe.

This operation is perhaps the most delicate and difficult, for it involves the relationship between two elements: on the one hand, what Pierre Hadot identified as the most essential part of ancient philosophy – the spiritual exercises prescribed by the ancient Schools in order to help human beings deal with difficult circumstances by transforming the way they look at the world and at life, in order to carry out a metamorphosis of our very personality, so that we

change, but many researchers (e.g. Bauer 2020, 84 ff.; 162; Avray 2020, 30-40) have concluded that the destruction of these natural habitats, by increasing stress on virus-bearing species such as bats and their proximity to and interactions with humans, were key factors in the triggering and propagation of the COVID-19 pandemic, as they will be of the future pandemics that will inevitably follow, unless we change our attitudes and our environmentally destructive practices.

¹³ Hadot 1995, ch. 9, p. 238-250; 2002, p. 206-207.

¹⁴ Hadot 1995, ch. 8, p. 215-237; 2002, p. 138; 192-197; 210; 245;.

¹⁵ Hadot 1995, 197; 201; 1998; 104-105; 133, 137, 154; 164-167; 2002, 136-138; 207

¹⁶ The neo-Pyrrhonian Sceptic Sextus Empiricus seems to combine both the Stoic method of identifying and circumscribing unpleasant phenomena and the Epicurean view that intense pain is temporary and long-lasting pain is bearable; cf. *Against the Mathematicians* 11, 150-154. Sextus even adds a key consideration absent from the surviving Epicurean texts: in cases of extreme pain, doctors can prescribe painkillers (*anôdunous dunameis*).

¹⁷ Hadot 1995, p. 222-223.

¹⁸ Hadot 1995, p. 88-9.

¹⁹ Hadot 1995, p. 86-87. Compare Bauer 2020, 125-130 on the need for “Hedonic renunciation” (hedonischer Verzicht), and compare Hans Jonas’ call for an ethics of voluntary restraint (Chase 2020, p. 70).

become more happy, more free, and, in a sense, so that that we can even come to exist on a deeper, more intense and more authentic level. On the other, there are the theoretical superstructures (logical, ethical and metaphysical) constructed on the basis of these exercises, primarily in order to defend each School's practices in the context of debates with other Schools. Hadot believed that, to a large extent, the spiritual exercises, many of which are common to several ancient Schools, are more fundamental than, and can be detached from, the different and often contradictory theoretical superstructures that characterized each school²⁰. Thus, Hadot believes, it is possible to practice Platonic "greatness of soul" without accepting the Platonic dogma of the existence of a higher, separate realm of intelligible Forms; one can practice Stoic spiritual exercises without believing that all external events are guided by an omniscient, providential God made of fiery physical particles who is, in some sense, identical with Zeus, Nature, and Fate; one can practice Epicurean exercises without believing that the sun is only slight larger than we perceive it to be; and one can practice Aristotelian virtue ethics without believing in the existence of a Prime Mover and of separate intelligences. This is, of course, one of the most controversial aspects of Hadot's thought, and is not without relevance to the subject of this contribution, as we shall see.

The diagnosis. 2, The epistemological crisis

So far, I have spoken of the objective, external, physiological-epidemiological aspects of the current crisis originated by the COVID-19 pandemic, which have been, of course, extremely devastating and have monopolized international media coverage for nearly a year. Less obvious and spectacular, but perhaps equally serious in the long run, is the *epistemological* crisis we are currently experiencing. Large sectors of the global population no longer believe in science. Instead of accepting the current scientific analyses of the nature and health effects of the SARS-CoV-2 virus, for instance, its modalities of propagation and contagion, and the measures of enforced social distancing and various degrees of lockdowns or shutdowns that governments have adopted as a result of these scientific findings, many people worldwide prefer to embrace various forms of conspiracy theories and/ quack remedies which are rampant on social media. In Mexico today, for instance²¹, where as of this writing hospital emergency wards are close to full capacity as a result of the pandemic, and authorities in Mexico City have declared a state of red alert, one can find any number of quack cures and conspiracy theories in circulation in the web. Such theories vary in their details, advocating scientifically-disproved cures such as magnet therapy, oxygenation therapy, or chlorine dioxide²². What they all have in common is

²⁰ This is, of course, perhaps the most controversial aspect of Hadot's interpretation of ancient philosophy, leading to accusations that Hadot devalues the role of rational, critical thought and ends up preaching some mystical, pseudo-religious doctrine instead of advocating "real" philosophy. On these objections, which ignore Hadot's important remarks on both the "incommensurability" and the "reciprocal causality" between philosophical discourse and philosophical practice, see, for instance, Aubry 2013, Chase 2016; Sharpe 2014; 2016.

²¹ I choose the example of Mexico not because the situation there is any better or worse than elsewhere in the world, but because I have first-hand experience of the situation there, having lived in Mexico City from October 2019 to March 2020.

²² See comusav.com, which organizes internet conferences throughout Latin America in which "thousands of doctors in more than 20 counties ... will inform the world about the scientific evidence that chlorine dioxide is very effective and is the best option to eradicate this virus". Under the heading "The greatest social experiment in

the claim that these groups, and these groups alone, are in possession of the truth, whereas what scientists and governments have to say about the origins, nature and treatment of COVID are not merely erroneous, but are the result of sinister plots. Often, it is the virus itself which, it is claimed, has been intentionally fabricated in order to further the nefarious goals of the shadowy conspiracy which the authors of such scams claim they have discovered²³. In Germany²⁴, various so-called “Querdenker” (literally “cross-thinkers”, or people who think “outside the box”) question the reality of the virus, its seriousness, and/or the need for such public safety measure as mask wearing, social distancing and lockdowns, and they periodically organize massive demonstrations.

Michel Bitbol on the claims of contemporary science

In article that will soon be published²⁵, the eminent French epistemologist and philosopher of science Michel Bitbol argues, starting out from a Buddhist, Kantian, and phenomenological perspective, that an attitude of reserved humility is the kind of approach that is best suited to our best current theories of science. Many of the apparently intractable problems of contemporary philosophy of science, including the interpretation of quantum mechanics and the theory of how the brain gives rise to consciousness, are, Bitbol maintains, the result of our mistaken belief that the task of science is to give us real, objective knowledge of the way the world really is in itself, independent of our investigation of it. In fact, however, as Bitbol argues, Western science is, or at least should be, a merely a “reasonably plausible (but non-unique and provisional) scenario to accommodate the presently available systems of prediction of empirical data within the framework of our culturally biased beliefs”. Scientific theories, on Bitbol’s reading, have “a (collectively) adaptive rather than representational value”. It follows,

history”, a widely circulated anonymous Spanish-language Facebook posts claim that the COVID crisis was artificially and intentionally created: autopsies of alleged COVID victims are deliberately prevented in order to facilitate the “lie” that the virus is propagated through the air; masks and social distancing have been imposed to destroy human relations and break down the fabric of society, in order to facilitate manipulation by a shadowy “Elite”. The cure for the virus, discovered by an alleged doctor in Lima, Peru, is oxygenation. One website which transmits this widely-disseminated post contains a link to a YouTube video accusing Bill Gates of having fabricated the virus; see <https://www.youtube.com/watch?v=ppKGUtoyVCo&feature=youtu.be>, accessed Dec. 21 2020. Another anonymous Spanish-language Facebook post assures readers that the COVID-19 virus does not exist: the symptoms attributed to it caused by flu vaccines which contain an anti-coagulant, as part of “the plan of Bill Gates, bankers, laboratories and politicians to reduce the world’s population”: see <https://images.app.goo.gl/vSvypW3hL8nTGtyeA>, accessed Dec. 21, 2020.

²³ The psychological and socio-economic origins of this tendency to subscribe to conspiracy theories, and the role of the internet in their propagation, are well described by Bauer 2020, 108ff., who rightly calls attention to the role of “narzisstische Gruppen” of nationalist and far-right groups, as well as of corporations and right-wing political organizations in the dissemination of such disinformation.

²⁴ Once again, I choose the example Germany merely to stick with what I know from my own experience, having resided in Berlin from September to December 2020.

²⁵ Bitbol, In Preparation. On November 26, 2010, I had the honor of participating in an online discussion of this paper with Bitbol and Antoine Lutz, organized by Marc-Henri Deroche of the Graduate School of Advanced Integrated Studies in Human Survivability of the University of Kyoto, Japan. The remarks that follow are based partly on Bitbol’s paper, partly on the comments I made on that occasion. I thank Professor Deroche for permission to reproduce them here. References to Bitbol’s text are taken from the pre-publication version of the text which the author made available to us.

therefore, that Western science is a “branch of conventional/practical knowledge”²⁶. One of the most interesting and fruitful distinctions Bitbol proposes in his paper is, I believe, that between what he calls a transitive and an intransitive attitude. By a transitive attitude, Bitbol designates “focused attention directed towards an object of experience or an object of thought ” which is characteristic of a metaphysical stance, while by an “intransitive attitude” he means “open attention (or “open presence”) without a specific object”, a stance associated more with contemplative and phenomenological attitudes. Bitbol thus advocates

“an “intransitive” rather than “transitive”, lived rather than observed, experienced rather than objectified, unutterable rather than conceptualized kind of “ultimate truth””.

It would seem that Bitbol’s differentiation between transitive and intransitive attitudes fits nicely with the Hadot’s distinction, discussed above, between two Western attitudes to nature: Hadot’s Promethean stance seems to correspond to Bitbol’s transitive attitude, while Hadot’s Orphic attitude seems to correspond to Bitbol’s intransitive approach to Nature. I believe, moreover, that such an “intransitive” attitude corresponds to the approach of the ancient Empiric medical school, insofar as we can reconstruct the outlines of their methodology.

Yet not only is this “humble” approach to the philosophy of science, according to Bitbol, the most appropriate and efficacious when it comes to dealing with scientific issues today: it may also have a sociological, political, or – to speak in terms which Bitbol does not use but which I borrow from Pierre Hadot – a *therapeutic* aspect²⁷.

Bitbol is of course aware of the current global crisis of epistemological belief in the sciences, and he suggests that there may be a sense in which science itself is partly responsible for this loss of faith in its claims. By presenting itself as the ultimate judge on questions pertaining to the ultimate, objective nature of things, science leaves itself open to crises of doubt when it fails to deliver the certitude it has promised. As in ancient philosophy and medicine, disputes between rival schools were a major factor in the emergence of Sceptical tendencies²⁸, so today, the hesitations, contradictions, debates and changes of opinion among experts which have, quite naturally, emerged since the outbreak of the current COVID pandemic, as laboratory studies increase in quantity and sophistication and initial theories have had to be revised, may

²⁶ We will return to this emphasis on the practical value of science in what follows.

²⁷ Cf. once again Voelke 1993.

²⁸ Thus, for instance, one reason why the sceptically-inclined medical school of the Empirics denied the possibility, asserted by the rival Rational school, of inferring from observable symptoms to non-observable causes, was “the Rationalists’ manifest inability to agree on a single, tolerably consistent, account of the matters at issue, or even the broad outlines of one (...) It appeared that reason did not speak with one voice as the Rationalists had promised it would” (Allen 2001, p. 96; cf. Frede 1990, 229). In the first century CE, Celsus attributes the Empiric doctor’s belief that nature is incomprehensible back to the lack of agreement among experts: “That nature cannot be comprehended is in fact patent, they say, from the disagreement among those who discuss such matters; for on this question there is no agreement, either among professors of philosophy or among actual medical practitioners” (Celsus, *On Medicine*, Volume I: Books 1-4, Preface 27-28, transl. W. G. Spencer, Cambridge, MA: Harvard University Press, 1935); cf. Galen, *De sectis*, 7, 15ff. ed. Helmreich.

produce the impression among the public that even the most authoritative statements by scientists are mere matters of opinion. From there, it is only a brief step to the claim that the opinions about COVID of any individual, despite her lack of any medical knowledge or professional training, are of equal weight as those of the most distinguished doctors, virologists and epidemiologists²⁹.

As a remedy to this situation, Bitbol suggests that it is urgent Western science and scientists rediscover a sense of humility. By acknowledging that its theories are basically social constructs and recipes for practical success that have no valid claim to discovery of ultimate reality, but have met with success in the past and stand a reasonably good chance of doing so in the future, scientists would leave themselves less open to large-scale disbelief when, as is inevitable, their statements turn out to have been inaccurate, requiring them to change their views.

Fake News, Disinformation and propaganda: Does ancient philosophy have anything to offer?

Widespread disbelief in science and conspiracy theories, propagated especially on social media³⁰, can have extremely deleterious effects, impeding the social solidarity needed for effective measures to minimize the damage to public health caused by the SARS-CoV-2 virus, in addition to their catastrophic implications for the future of democracy as a form of government, due to their efficacy in influencing the outcome of elections³¹. What remedies can we mobilize today against the massive propagation of Fake News and conspiracy theories? Can ancient philosophy be of any assistance in this regard?

One can think of several possible affirmative answers. The rationalist philosophies of Plato and Aristotle contain important discussions on the importance of critical thinking: in particular, Aristotle's meticulous analyses in the *Organon* of the structures of argumentation, and especially of how to recognize and deal with fallacious arguments³², are still relevant today. Another, equally promising candidate might seem to be Stoicism, which, in the form of "Modern Stoicism", has become extremely popular as of this writing³³. As Pierre Hadot has shown, one of the three main aspects of Stoic thought corresponded to logic, and Hadot calls it "the Discipline of Assent"³⁴. Its main precept was that of carefully scrutinizing every

²⁹ In another sense, this attitude of distrust of experts is more deeply rooted in a persistent North American mistrust of intellectuals in general, and predates the current COVID crisis. It was exacerbated by the anti-science attitude of Donald Trump (who, while he had himself and his wife vaccinated as early as January, carefully kept this fact hidden: <https://www.theguardian.com/us-news/2021/mar/01/donald-melania-trump-covid-vaccines>, accessed March 4 2021) and his acolytes, is still alive and well, and will remain a powerful force in American politics for the foreseeable future.

³⁰ Bauer 2020, 114ff.; 175-178

³¹ Cf. Bauer 2020, 115.

³² Chiefly in the *Sophistici elenchi*. But the considerations in the *Topics* and *Rhetoric* on how to win debates, regardless of the validity of one's arguments, are full of acute psychological insights, and are therefore important for any understanding of the persuasive mechanisms of Fake News.

³³ As of writing, the Facebook-based Stoicism Group, moderated by Donald Robertson, has nearly 85,000 members worldwide, see <https://www.facebook.com/groups/Stoicism>, accessed Dec. 24, 2020.

³⁴ Hadot 1998, ch. 6, p. 101-127.

representation (Greek *phantasia*) or item of information impinging upon our senses from the external world³⁵, in order to ensure that the propositional content of such representations accurately corresponds to objective reality, instead of merely reflecting our subjective beliefs, preferences, and prejudices.

Yet here we encounter once again the problem of the relation between the concrete, practical methods advocated by ancient philosophical schools and their metaphysical or ontological justifications, which, as we have seen, complicates the necessary process of updating ancient philosophy in order to make it relevant to contemporary life. If Epictetus and Marcus Aurelius urge us to examine our representations in order to distinguish what is true in them from what is false, before granting them our assent, this is because such a distinction was relatively unproblematic for the Stoics. Their epistemology was based on the existence of what they called a “cognitive”, “objective” or “comprehensive representation” (Greek: *phantasia katalêptikê*), a presentation so clear that it basically compelled us to assent to it. Such presentations were defined as being so evident that it was not possible for them to be produced by a non-existent object, or for them to fail to correspond accurately to such an object³⁶: they were held to be self-evident and self-confirming.

I suggest, however, that most of us today no longer believe in the existence of such “comprehensive representations”, and that, given the centrality of this concept for Stoic epistemology, this fact raises grave doubts about the viability of Stoicism as a response to the contemporary problem of fake news. It has now become much more difficult to identify the precise criteria by which we are to distinguish the true from the false. Already in Hellenistic times, the Stoic doctrine of the comprehensive presentation was highly controversial³⁷. In fact, the entire epistemological debate, which went on for at least three centuries, between Stoics, Epicureans, Peripatetics and Sceptics, to name but the major players, can be said to have revolved primarily around this issue. In this debate, one can distinguish very roughly two sides: on the one hand, Stoics and Epicureans defended the infallibility of sense presentations (properly analyzed), and claimed that the certainty they provide can and should serve as they unshakeable basis on which the conceptual edifices of logic, ethics and physics should be constructed. Platonism, in the sceptical orientation it assumed, perhaps following tendencies

³⁵ Compare the distinction between “fast thinking” and “slow thinking” as advocated by Daniel Kahneman (2011). It has been suggested that persons for whom “slow thinking” is a character trait are less likely to fall for fake news: cf. Bauer 2020, p. 116 & n. 160.

³⁶ According to the standard definition, as found for instance in Cicero, *Lucullus* 18; Sextus Empiricus, *Against the Mathematicians* 7.402. Cf. the other texts cited by Long & Sedley, 1987, ch. 40, vol. 2, p. 243-254, with the commentary vol. I, p. 249-252.

³⁷ The literature on epistemology in Hellenistic philosophy in general and the various stages of Sceptical philosophy in particular is, of course, vast, and a serious paper on Scepticism from the viewpoint of the history of philosophy should take into account the multiple publications of E. Spinelli, L. Castagnoli, G. Striker, R. Bett, J. Brunschwig, M. Burnyeat, D. Sedley and many others. Such is not the ambition of the present contribution, and all my pronouncements on ancient Scepticism, whether Pyrrhonian or Academic, are to be taken as preceded by a tacit FAPP: “For all practical purposes”. For the issues discussed in this paper I have found the works of Viano (1981) and Allen (2001) particularly useful.

implicit in Speusippus, in what is known as the Middle and New Academy³⁸, as well as the Sceptical school itself, mobilized an armada of arguments to refute this Stoic doctrine. This led them to defend a wide spectrum of positions: from the radical denial that anything can be known, including the statement “nothing can be known”, to several varieties of probabilism, which maintained that while ultimate certainty about the nature of external reality cannot be achieved, we can assign various levels of probability to our presentations, and act in a manner which, at least externally, does not differ appreciably from that of the *hoi polloi*, or the man in the street³⁹. It is this probabilistic variant of Scepticism, also advocated by the ancient medical school of the Empirics, which, in my view, is the best candidate for the ancient philosophical tendency best suited for life in the age of COVID.

Who were the Sceptics?

Followers of the philosophical school known as Scepticism traced their origin back to Pyrrho of Elis (c. 365-c.270 BCE)⁴⁰, who had accompanied Alexander the Great to India⁴¹, where he had been impressed by the “gymnosophists”⁴², philosophers who may well have included Buddhists. Although Pyrrho wrote nothing, and the precise contours of his philosophical doctrines are therefore the subject of scholarly debate, it is relatively uncontroversial to state, with Antony Long⁴³, that the basis of his outlook can be summed up as the tenet that the nature of reality is unknowable⁴⁴, and that his main ground for this claim was that “we cannot

³⁸ The most important figures here are those of Arcesilaus (c. 315-241 BCE) and Carneades (c. 214-129 BCE). The views of the New Academy are best known to us from the philosophical dialogues of Cicero.

³⁹ Cf. Hadot 2002, 111-113.

⁴⁰ Like the other Hellenistic schools of philosophy, Scepticism went through considerable changes in the course of its existence. I will treat the Sceptic tradition here as if it were relatively monolithic (FAPP!).

⁴¹ See now especially Beckwith 2015, p. 10; 14-21; 48-49.

⁴² Diogenes Laertius 9.63; 9.69.

⁴³ Long 1986, p. 81-82.

⁴⁴ Cf. Pyrrho, Testimony 53 Declava Caizzi = H. Heiland, *Aristoclis Messenii reliquiae*, Giessen: Meyer, 1925, fr. 6: Τὰ μὲν οὖν πράγματ' ἀφ' ἑσῆς ἀποφαίνεσθαι ἐπ' ἴσης **ἀδιάφορα** καὶ **ἀστάθμητα** καὶ **ἀνεπίκριτα**. Long (1986, p. 81) translates these three key adjectives as “equally indistinguishable, unmeasurable and indeterminable”; Sedley and Bonazzi (apud Declava Caizzi 2020, p. 143) as “undifferentiated, unstable and inarbitrable”. In any case, the basic idea seems clear: reality as it is in itself cannot be precisely known to human beings, whence it follows that we cannot judge them. Compare M. Bitbol’s (In Preparation) account of the doctrine of Madhyamaka Buddhism: “the ultimate truth of Madhyamaka (...) remains unutterable and inexpressible.” For a close analysis of this Pyrrhonian testimony, and an attempt to identify the three terms *adiaphora*, *astathmêta* and *anepikrita* with the Buddhist Trilakṣaṇa (“Three characteristics”) of *anitya*, *duḥka* and *anātman*, see Beckwith 2015, ch. 1, p. 25-34, with the author’s conclusion (p. 32) that “Pyrrho’s version of the Trilakṣaṇa is so close to the Indian Buddhist one that it is virtually a translation of it”. According to Celsus (*On Medicine*, Preface 27-28), the Empiricists refrain from the search for hidden causes because *Nature* is incomprehensible (obscurarum vero causarum et naturalium actionum quaestionem ideo supervacuum esse contendunt, quoniam **non comprehensibilis** natura sit): In contrast, Sextus Empiricus (*Pyrrhonian Sketches* 1.236-41) reports that the Methodist doctors, whose viewpoint Sextus seems to consider preferable to that of the Empiricists (Lloyd 1983, 182f.), withheld judgment on whether nature is or is not incomprehensible. As Lloyd (1987, 162) points out, the Methodist position here may reflect a Pyrrhonian viewpoint, while the Empiric view, which Lloyd characterizes as “negative Dogmatism”, may reflect Academic scepticism. For a nuanced discussion of Sextus’s relations to the Empiric school, which concludes that Sextus was

get at objects independently of sense-perception, and sense-perception provides no guarantee that we apprehend things as they really are”⁴⁵. As the Pyrrhonian Sceptics argued, since sense-perception⁴⁶ or rather the phenomena⁴⁷, are all we have access to, and we can never “step outline” such perceptions to confirm whether our not our sense impressions actually coincide with the external objects that are presumably their source, we can never be sure that such perceptions provide us with an accurate picture of external reality. This is precisely the point made by Michel Bitbol (In preparation) when, citing Kant, he challenges the claims of scientific naturalism, pointing out that “the claim that scientific theories are true (or approximately true) representations of reality as it is, existing independently of us, is in principle unverifiable⁴⁸.”

The Sceptic tendency in ancient philosophy can best be understood as a reaction to positions they characterized as “dogmatic”, including first and foremost the Stoics. As we have seen, the Sceptics denied the Stoic theory of the comprehensive, self-evident presentation: for every presentation that seems to us to be certainly true, the Academic Sceptics claimed, there can always be another presentation, virtually indistinguishable from the true one, which happens to

an Empirist who sought to combat “dogmatic” tendencies with the Empiric movement itself, see Spinelli 2016 279-282, with ample references to further literature.

⁴⁵ Cf. Spinelli 2004, 34: for a neo-Pyrrhonist like Sextus Empiricus, “every attempt to grasp the truth, to establish “how things really are” (come stanno veramente le cose) seems destined for an inevitable heuristic checkmate”.

⁴⁶ *Aisthêsis*. For sensation as the criterion for the medical Empirics, see Stok 1993, 602, citing Galen, *Subfiguratio Empirica* p. 44, 10-12 Deichgräber.

⁴⁷ *Ta phainomena*, which “things as they appear to us” or, as Long (1986, 83) prefers to translate, “the object as perceived”; on Pyrrhonian adherence to the phenomena, cf. Spinelli 2004, 41. According to Diogenes Laertius (9.78), the Pyrrhonist procedure is a manner of reporting on objects as perceived” (“Ἔστιν οὖν ὁ Πυρρώνειος λόγος μῆνυσις τις τῶν φαινομένων), translation Long (1986, p. 85). However, the manuscripts read μνήμη, “memory” instead of μῆνυσις, “announcement” or “manner of reporting”. “Memory” is probably the right reading, and is adopted in the recent critical editions by Marcovich (2008) and Dorandi (2013). There may be an allusion here to the Sceptic doctrine of signs, according to which, against the Dogmatists who accepted the validity of “indicative” signs, which allow one to infer from the phenomena to hidden, non-observable phenomena, the Sceptics accepted only “memorative signs”, as an example of which they adduced fire and smoke. If for us, fire is (legimately) a “sign” of smoke, this is merely because it reminds us that whenever we have observed smoke in the past, it has been observed to be accompanied by fire. On the Sceptic and Empiric theory of signs, see Frede 1990, 247; Allen 2001; Spinelli 2004, 28ff.

⁴⁸ Bitbol continues: “Kant denounces an elementary vicious circle typical of scientific realism: since our only alleged way to know reality is scientific theories, demonstrating conclusively that reality is depicted by scientific theories amounts to comparing these theories with themselves”.

be false⁴⁹. The practical implication they drew from this was the need to withhold judgment (*epokhê*)⁵⁰.

Another key difference between the Stoics and the Sceptics concerned their respective attitude towards the epistemic status of the technical arts or crafts (Greek *tekhnai*), and the corresponding axiological status of their practitioners⁵¹. For the Stoics, following the Platonico-Aristotelian tradition, technical knowledge – i.e., that which is displayed in such “arts” as small-scale manufacturing, craftsmanship, sculpture, farming, sailing, medicine, etc. – was inferior to theoretical or epistemic knowledge (Greek *epistêmê*), primarily because the possessor of epistemic knowledge, since she knows the underlying structure of physical reality and its causal laws, knows not only *that* her actions are effective, but also knows *why*⁵². She can therefore formulate the rules underlying her successful actions, and teach them to others. The merely experienced person, by contrast, cannot formulate such rules, but proceeds by mere memory and experience. As Aristotle conceded⁵³, the possessors of such knowledge can often perform their tasks more effectively than those who possess only theoretical or bookish learning of a given subject. Nevertheless, faithful in this respect to the Socratic-Platonic tradition, Aristotle still held that precisely because they could not articulate their knowledge in a rational, systematic form, possessors of such knowhow are inferior in axiological value: in fact, Aristotle remarks, manual laborers who act without knowing why they do so are not much different from inanimate objects, such as fire, which burns without knowing why it does so⁵⁴. This attitude was maintained in Stoicism: as Cicero points out (*Lucullus* 144-145), only the Stoic Sage knows why and how even the more skillful and successful workers – great sculptors such as Polycleitus, for instance – do the things they do, while such workers themselves are ignorant of such factors. In

⁴⁹ Cf. Cicero, *Lucullus* 26.83 on the four Sceptic arguments intended to show that nothing can be perceived, the last one of which is the most crucial: “There is no true presentation coming from the senses such that another presentation, identical with it but which cannot be perceived, cannot be ranged alongside it”. Here, “being able to be perceived” roughly amounts to “capable of being unambiguously and correctly identified”. See Allen 2001, 102ff. for further ancient sources. Interestingly, the neo-Pyrrhonian Sceptic Sextus Empiricus turns this argument against the probabilism of the Academic Sceptics, arguing that for every “probable” or “plausible” (*pithanos*) presentation there can be a virtually identical one that is in fact false, so that the “probable” cannot serve as the criterion of knowledge any more than the Stoic “comprehensive representation”; cf. Sextus, *Adv. math.*, 7.435-439 with the comments of Spinelli 2004, 24 & n. 10.

⁵⁰ This notion of *epokhê* was, of course, adopted by Husserl, who made it the basis of the methodology of phenomenology. On the affinity between Husserlian phenomenology and Buddhism, see Bitbol, In preparation.

⁵¹ The Greek noun *tekhnê* and the adjective and adverb deriving from it (*tekhnikos*, *tekhnikôs*) are difficult to translate. Since the time of Plato and the Hippocratic medical writings, they were used to designate the type of knowledge or knowhow which derives from practice and experience, rather than being explicitly deduced from an axiomatic system of rules. *Tekhnê* is often translated as “art”, and the adjective *tekhnikos* as “artistic”, but since these terms primarily connote aesthetic creation today (painting, sculpture, music, dance), I have chosen to use the somewhat inelegant terms of “technique” and “technical” instead.

⁵² Cf. Aristotle, *Metaphysics* A 1, 981a23-28: if it is generally thought that knowing (*to eidenai*) pertains more to technique (*tekhnê*) than to experience (*empeiria*), and if we assume that technicians (*tekhniteis*) are wiser (*sophôteroi*) than experienced persons, it is because technicians know the reason why, whereas (merely) experienced persons do not (τοῦτο δ' ὅτι οἱ μὲν τὴν αἰτίαν ἴσασιν οἱ δ' οὐ).

⁵³ *Metaphysics* A 1, 981a20-981b2.

⁵⁴ *Ibid.*, 981b1-5.

contrast, the Sceptics, perhaps following in the footsteps of the Academic philosopher Speusippus, who developed a theory of a “scientific sensation” that participates in “scientific practice”⁵⁵, tended to consider technical knowledge as a heuristic instrument intended to assist the human senses, which, *pace* the Stoics, are always fallible. Technical knowledge in this sense is effective, but cannot claim to know reality as it is in itself⁵⁶. We may thus speak of a Sceptic rehabilitation of artisanal knowledge, which was also crucial for the medical school of the Empirics.

The Empiric Medical school as a candidate for the most relevant philosophical for the Age of COVID

However, rather than concentrating on Pyrrhonian or Academic Scepticism *per se* in what follows, I wish to focus on the scientific methodology of the medical school known as the Empirics⁵⁷, whose views were akin in many respects to those of the Sceptics. Rather than resulting in a radical denial of positive knowledge and a complete moral relativism, however, the example of the Empirics testifies that a cautious, humble, pragmatic, probability-based epistemology⁵⁸ and a non-interventionist approach to science are quite compatible with a robust and sophisticated scientific methodology⁵⁹. The Empiric approach may, in fact, have included a theory of scientific experimentation that anticipates Francis Bacon by more than 1500 years, while eschewing the adversarial, objectifying aspects that have largely characterized science in the Modern Age⁶⁰.

⁵⁵ Speusippus, in Sextus Empiricus, *Adv. Math.* 7. 145 = fragment 75 Tarán = fr. 1 Isnardi Parenti. With Speusippus’ “scientific sensation” (ἐπιστημονική αἴσθησις) compare the notion of “rational experience” (*rationabilis experientia*), which was how the Empirist Theodas of Laodicea (early 2nd cent. CE?) classified the method of “transition from the similar”, or analogical extrapolation; cf. Galen, *Subfiguratio empirica* 4, p. p. 50, 2-4 Deichgräber; Stok 1993, 606.

⁵⁶ Viano 1981, p. 606. In contrast, for the Stoically-inclined Antiochus, the success of the technical arts showed that the senses have access to objective reality as it is in itself. This is precisely the attitude of scientific naturalism as sketched by Bitbol.

⁵⁷ The historical relations between Pyrrhonian Scepticism and the sceptically-oriented Empiric medical school are highly controversial. For an excellent discussion see Allen 2001, who suggests, contrary to the *communis opinio*, that it was the Empirics who influenced the Sceptics, more than *vice versa*. The standard study and collection of texts of the Empiric school remains Deichgräber 1965. See also Viano 1981, Perilli 2004, and the literature cited in Spinelli 2016, 278-282. Pomata 2011 provides an excellent, wide-ranging study, but I believe the author exaggerates the supposedly normative meaning of the Greek word *têrêsis*. For a careful, nuanced analysis of this term in Sextus Empiricus, cf. Spinelli 2004. The standard study and collection of texts of the Empiric school remains Deichgräber 1965; see also Viano 1981; Frede & Walzer 1985; Fred 1990; Allen 2001; 2010; Perilli 2004, Spinelli 2004; 2016, 278-282.

⁵⁸ Deichgräber (1965, p. 269) speaks of Empirism as a science that unites a focus on phenomena with a mistrust of dogmatism, and compares the approach of Polybius in historiography.

⁵⁹ *Pace* Von Staden 1975; see below.

⁶⁰ On the similarity of the Empiric methodology to that of modern science, particularly that of Claude Bernard, see Cariou 2019 (although the author’s presentation of Empiric doctrine is to be used with caution). The Empiric “school” in fact included physicians of various dates and orientations, and there may have been a gradual evolution in the views defended by the school over the course of its centuries-long existence (Frede 1990). For these reasons, to speak of *the* views of “the Empirics” is once again an abusive simplification, to be understood only FAPP.

The fully developed form of the Empiric school or tendency of medicine, as it developed in reaction to the tenets and methodology of the Rationalist or Dogmatist school, was, as far as our sources allow us to reconstruct it, approximately as follows⁶¹.

The Empirics base their methodology on three pillars:⁶² (1) first-person observation (Greek *autopsia*, a term which, as Galen observes, they seem to have coined⁶³); (2) *historia*, or the recorded “history” of their own first-person observations which previous doctors have recorded in the form of case histories; and (3) “transition from the similar” (*metabasis ek tou homoiou*), a method that allowed extrapolation from one case, illness, part of the body, or remedy to another one, perceived as similar⁶⁴.

Contrary to the Rationalists, the Empirics denied the value of seeking for hidden causes in medical diagnosis and treatment⁶⁵, focusing instead on analysing the patient’s symptoms and on determining which cures were effective in any given case⁶⁶. In the process, however, they developed a highly sophisticated, multi-level system of levels of experience and the kinds of certainty to which they lead. The series consists in the following stages⁶⁷:

1. One discovers that a remedy A cures illness B, by an experience (Greek *peira*) that is either “automatic”/ “involuntary” (*automatikê*) or “extemporary” (*autoskhedios*)⁶⁸. Both these

⁶¹ I follow the exposition of Deichgräber, who in turn bases himself primarily on Galen’s *Subfiguratio empirica*, which survives only in the Latin translation by Niccolò di Reggio (14th cent.), ed. with a Greek retroversion by Deichgräber 1965, p. 43-90.

⁶² Serapion of Alexandria wrote a work called “Discourse by means of Three” (*dia triôn logon*), while Glaucias wrote a work entitled “Tripod” (*Tripous*); cf. Galen, *Subfiguratio*, p. 83, 20 D.

⁶³ Galen, *Subfiguratio*, p. 47, 8-11 D.

⁶⁴ History and transition to the similar were conceived as supplements to the fact that the individual Empiric physician’s experience is necessarily limited: as Galen’s Rationalist opponent objects to the Empirics, they cannot see, or remember, or write down, “such myriads of differences as one finds in patients” (Galen, *On Medical Experience* 7.1, translation Frede). Empiric physicians must therefore their base of knowledge by case histories from the past (*historia*), and extrapolate from what they have experienced by means of analogy (*metabasis ek tou homoiou*), thereby applying previous experience to unfamiliar new cases. In the case of both of these supplementary tools, strict methodological precepts define the degrees of reliability of historical sources used and what kinds of analogical inferences are allowed in what circumstances: above all, such inferences can lead only to probabilities of outcomes, and always await confirmation by experience.

⁶⁵ As early as the first half of the 3rd century BCE, the Empirics were called *anaitiologêtoi* (cf. Erasistratus, fr. 35 Garofalo = fr. 25, p. 106-107 Deichgräber 1965). To the meanings of this word indicated by the best Greek dictionaries (DGE: “cuya causa no se puede explicar”; LSJ: “for which no cause can be assigned,” “Montanari: “A cui non si può attribuire una causa”) one must therefore add “tending to refrain from searching for causes”.

⁶⁶ This proto-positivist approach led them to dismiss such basic assumptions, which were to dominate Western medicine for nearly two millennia, as the theory of humors (Deichgräber 310-311). They also rejected the use of dissection, which was inaugurated by Aristotle, extended to human subjects and augmented by the practice of vivisection by Herophilus (fl. c. 290 CE) and Erasistratus (fl. c. 250 BCE), and extolled and practiced by Galen (cf. Van Staden 1975, 184-185). they also tended to limit the applicability such fundamental Galenic therapies as bloodletting (Deichgräber 321).

⁶⁷ Cf. the table in Von Staden 1975, p. 188

⁶⁸ On this distinction cf. Von Staden 1975, 188f.; Stok 1993, 602.

divisions are further subdivided into two: automatic experience is subdivided into “accidental”⁶⁹ and “natural”⁷⁰, depending on whether the event in question does or does not have an external cause. The intentional variety of discovery can occur either deliberately⁷¹ or through inspiration by dreams⁷². One such experience is virtually useless and non-scientific or, as the Empirics would say, non-technical⁷³.

2. The physician then proceeds to reproduce and test the initial observation that A cures B: i.e., he carries out what looks very much like what we moderns would call an experiment, but which the Empirics called an “imitative experience” (*mimêtikê peira*)⁷⁴, in order to confirm whether the curative properties of the remedy are again observed to be effective. The “imitative experience” seems to have consisted in “trying out” a cure discovered by means of the preceding varieties of *peira*: thus, for instance, having noticed, that a headache-sufferer felt better after accidentally severing a vein in her head, the physician proceeds to deliberately cut the same vein when another patient turns up displaying similar symptoms⁷⁵.

⁶⁹ The standard example given of an accidental cure is when a person suffering from a headache falls and opens a vein on his head: the resulting bloodletting alleviates his symptoms; cf. Galen, *Subfiguratio* 2, p. 44-45 Deichgräber; Galen, *De sectis*, p. 2, 19-21 ed. Helmreich; Deichgräber 1965, p. 292. The prescription of cutting a vein in the forehead to relieve pain in the back of the head is Hippocratic; cf. *Aphorisms*, 5. 68; *Epidemics* 6. 2. 13.

⁷⁰ The typical example of a natural “experience” is a nosebleed, which cures a patient although it occurs without external cause. What such cases have in common is the lack of a clearly perceptible efficient cause. Cf. Galen, *De Sectis* 2, p. 2, 15-18 H.

⁷¹ Examples of deliberate experiences range from a person reaching for a drink or water, wine or a pomegranate when thirsty or hungry (Galen, *Subfiguratio* 2, p. 45, 4-8 D.; *De Sectis* 2, 21-23 H.), to the more elaborate scenario of a hunter bitten by a wild animal while hunting in the mountains, who applies the wound whatever herb she happens to have at hand (Galen, *ibid*, p. 45, 8-12 D.; *De Sectis*, 2, p. 2, 21-23 H.). Von Staden, following Deichgräber, thinks this notion denotes “an intentional act of testing”, but this seems to me to abusively extend the range of what we usually understand by “testing”. Genuine testing does not occur until the stage of *mimêtikê peira*.

⁷² Galen, *De sectis*, 2, p. 3, 2-4 H. Cf. Von Staden 1975, 189.

⁷³ ἀτεχνον δὲ τὸ καθάπαξ αὐτοὶ φασιν Galen, *On Medical Experience* 7.3, ed. Walzer.

⁷⁴ Cf. Cf. Deichgräber 1965, 294-295; Galen, *Adversus ea quae a Juliano in Hippocratis aphorismos enuntiata sunt libellus* (CMG 5.10.3), p. 249-250 ed. Wenkebach, who enumerates other examples of Empiric discovery by imitations of naturally-occurring remedies for inflammations of the eye, jaundice, elephantiasis (i.e., probably leprosy), and dropsy. Elsewhere (*De locis affectis* vol. 8, p. 154f. Kühn) Galen admits that chance discovery may well be the origin of some remedies, as when a feverish man drinks cold water; but the application of cupping instruments to the head, for instance, cannot have arisen from this source, since nothing like it occurs in nature. This remedy must therefore have been devised by reason. On the uselessness of empiric imitation in the case of rare medical phenomena, see also Galen, *De locis affectis*, vol. 8, p. 371. Von Staden (1975, 189) unconvincingly argues that the *mimêtikê peira* consists merely in repeated observations: but *mimêsis* means “imitation”, not mere “repetition”.

⁷⁵ That this is when Galen means by “imitative experience”, and not, as Von Staden asserts, a mere repetition of experience, is clear from his account of the discovery of theriac in ch. 10 of the *Subfiguratio*. Here, after recounting two rather far-fetched and colorful anecdotes about how it was accidentally discovered that the ingestion of water or wine contaminated by dead snakes can cure leprosy, Galen describes how he himself administered snake-infused wine to a person suffering from a similar disease, which led to his cure. Galen makes it clear that his prescription was an *imitation* of the previous cases (a nostra *imitatione* p. 77, 29 Deichgräber; *imitari* ea que per experientiam cognita sunt, p. 78, 9-10). After this and other such experiences, one of which was inspired by the patient’s dream, Galen writes that “encouraged by all these experiences, I confidently began to use the snake drug copiously (*ibid.*, p. 79, 3-8 Deichgräber, translation Frede).

3. After two or three such “experimental” confirmations, one achieves the kind of knowledge or certainty that technicians – i.e. expert artisans or craftsman – possess (*tribikê peira*⁷⁶), but one still does not know whether A produces B always, most of the time, 50% of the time, or rarely. In other words, one knows from experience that A cures B, but this knowledge is not yet *quantified*, and is therefore not what we would call scientific and the Empirics would call “technical” or “theorematic”.
4. When one has repeated the experience often enough to acquire such quantified, proto-statistical knowledge of the efficacy of A upon B, i.e. when one knows whether A produces B always, most of the time, half the time, or rarely, one’s knowledge has become “theorematic” (Greek *thêorêmatikos*). At this stage, one has advanced from *peira* (test, trial, experience) to *empeiria* (the state of being experienced), which is henceforth – at this stage and not before – technical (literally, “part of a *tekhnê*”)⁷⁷. For the Empirics, the technique or art (*tekhnê*) of medicine *just is* the set of all such theorems.

Throughout this epistemological process, the key principle is to observe which phenomena occur before, simultaneously with, or after which other phenomena. In fact, for the Empirics, this careful observation and remembrance of the relations of temporal consecution is what science *is*⁷⁸.

We thus have a methodological scheme in which different meanings of the ambiguous Greek term *peira* (“trial, attempt, experience”) are distinguished. The series runs as follows:

natural or accidental *peira* => imitative *peira* => technical *peira* => theorematic *peira* = *empeiria*
=> art, craft or technique of medicine.

⁷⁶ The adjective *tribikê* derives from the noun *tribê*, “practice, literally “rubbing against”. Galen himself (*De Sectis* 2, p. 4, 11-13 H.) derives the adjective *tribikos* from *tetripthai*, perfect middle-passive infinitive of the verb *tribô*, meaning “to be practiced, expert” (LSJ s.v.II.4). Plato often indicates skills and knowhow acquired and practice at a sub-theoretical level by the hendiadys *tribêi kai empeiriai*, “by practice and experience”: cf. *Gorgias* 463C; *Phaedrus* 270b, etc. According to Galen (*De Sectis*, vol. I, p. 69 Kühn), *tribikê empeiria* is the state that results from the application of the principle of “transition from the similar” (*metabasis tou homoïou*). Compare Celsus, *On Medicine*, Preface 10, who quotes the early Empiric doctor Serapion as claiming that medicine consists “in usage and experience alone “ (*in usu tantum et experimentis eam posuit*). *Tribikê peira* is thus experiential, non-formalized, non-quantified, proto-scientific knowledge. Its best English translation might be “knack”; cf. Hankinson 2004, p. 4, who also considers “routine”, or, following D. S. Hutchinson (1988), “rule of thumb”. Again, Von Staden (1975, 191) provides a deflationary account, claiming that *tribikê peira* is “no less *atekhnos* and *alogos* than the *tribê* of Plato’s *Phaedrus*”.

⁷⁷ *Empeiria* is thus the *state* at which one *arrives* as a *result* of the three previous phases of *peira*, not merely their “sum”, as Von Staden claims (1975, 189).

⁷⁸ Fr. 45 Deichgräber = Galen, *De methodo medendi*, vol. 10, p. 126f. Kühn = translation Hankinson (1991, p. 63): “They [sc. the Empirics - MC] hold that the entire science (*tekhnê*!) consists in observation and recollection of what has been seen to go with what, what to precede what, and what to come after what, on many different occasions”. In this sense, at least, the Empirics clearly adhere to what we might call a phenomenological methodology.

Scholars have seen in this methodological scheme an ancestor, if not the almost fully-formed source, of the hypothetical-deductive “scientific method” that characterizes modern science⁷⁹. Be that as it may, what interests me more in the present context is the apparent modesty which the Empirics, at least at a late stage of their development, attributed to their craft. Menodotus (fl. c. 120 CE)⁸⁰, both a leading Empiric physician and a Sceptic philosopher, emphasizes that the methodology outlined above can lead only to probable, not certain results⁸¹.

Just as important is the fact that the Empirics seem to have practiced a markedly “non-interventionist” attitude to medicine. Rather than intervene in natural processes in a violent or intrusive way, they adopted a “wait-and-see” attitude, which, for instance, ruled out the use of dissection, and *a fortiori* of vivisection⁸². In the words of Viano⁸³, the Empiric acknowledgement that medicine is limited to practice suggests that what the Empirics were after was “a form of answer to nature suggested by nature herself”.

From Deichgräber to Bitbol: toward a rehabilitation of receptivity

79 On the Empiric emphasis on the importance of *quantifying* the frequency of the co-occurrence of remedy and cure, cf. Frede 1990, 244; Perilli 2004, 129f.; Galen, *Subfiguratio* p. 45, 15ff. Deichgräber. This aspect, which may have been introduced by Menodotus, seems to make Empiric methodology an even more plausible candidate for the title of predecessor of the modern “scientific method” than the passage of Sextus Empiricus, *Against the Astrologers* (cf. Spinelli 2004, 30 ff., with the literature cited n. 21), which merely emphasizes that for the astrologers to be able to claim their predictions are reliable, they would have had to observe the same correlations between celestial phenomena and events in human lives “not only once in case but *many times in many cases*” (οὐχ ἅπαξ ἐφ’ ἐνὸς ἀλλὰ πολλάκις ἂν ἐπὶ πολλῶν, *Adv. Math.* 5.103-104). This would seem to correspond only to stage 3 of the 4-stage Empiric methodology, that of *tribikê empeiria*. Likewise, the famous passage in *Against the Logicians* (*Adv. math.* 8.291, cf. Spinelli 2004, 33 & n. 32), where Sextus speaks of *theôrêmata* in the domain of apparent things (*en tois phainomenois*) that come about “by means of things *frequently* observed or investigated” (διὰ (...) τῶν πολλάκις τετηρημένων ἢ ἱστορημένων) also lacks any notion of precise quantification, and therefore corresponds only to stage three of the Empirist schema. In other words, Sextus appears to remain at the level of what Menodotus called *experientia inordinata* (Galen, *Subfiguratio* p. 45, 14-16 = T30 Perilli).

⁸⁰ On Menodotus, see the important monograph by Perilli 2004; Boudon-Millet 2005.

⁸¹ Galen, *Subfiguratio empirica*, 9, p. 89 Deichgräber; cf. Deichgräber p. 292: “ihre Forschungsergebnisse auf unverbrüchliche Sicherheit keine Anspruch machen können”.

⁸² On the Empiric rejection of dissection, on the grounds that it is both uninformative and cruel, see for instance Lloyd 1979, 166-7; 1987, 163f.; 1991, 191; 315-316.

⁸³ Viano 1981, 621. Compare Deichgräber 294, who points out that Kant’s notion of Reason “obliging nature to answer its questions” (“...die Vernunft (...) die Natur nötigen müsse auf ihre Fragen zu antworten”, *Kritik der Reinen Vernunft*, Vorrede zum zweiten Auflage, p. 18 ed. Schmidt) is antithetical to the Sceptic-Empiric approach. A few lines previously, Kant praises Francis Bacon (des sinnreichen Baco von Verulam, p. 17, 15), usually considered the originator of the scientific experimental method, who, notoriously, wrote that “the secrets of nature are better discovered by the torments of the technical arts than when in proceeds in its natural course” (*occulta naturae magis se produnt per vexationes artium, quam cum cursu suo meant, Novum Organon* I, 98). In a footnote to his Latin edition, Fowler notes: “Nature best discovers her secrets, when tortured by Art. This is an excellent illustration of the advantage which Experiment, at least in many cases, possesses over Observation”; cf. *Bacon’s Novum Organum*, ed with introduction and notes by Thomas Fowler, 2nd ed., Oxford: Clarendon Press, 1889. On Bacon’s project of “discovering and dominating nature”, and his use of the “vocabulary of violence”, see Hadot 2006, p. 120ff.

In the form of medical Empirism, practiced in the Greco-Roman world from approximately the 3rd century BCE to the 2nd century CE, we thus seem to have an approach to science that presents several characteristics that may qualify it as one of the most appropriate ancient philosophical schools or tendencies for the Age of COVID, both in its physical-epidemiological and in its epistemological aspects.

1. From an epistemological viewpoint, the probabilistic scepticism practiced by the medical Empirists recommends itself as a potential antidote to conspiracy theories and Fake News. Their advocacy of caution and withholding assent (*epokhê*) is antithetical to any kind of dogmatism and fundamentalism, as it is to quackery and disinformation in general. The Empirics' recommendations on how to evaluate the works of their predecessors in the context of *historia* are exemplary in this regard: no information coming from the past should be acted on before one considers whether or not it can be experientially verified. As Galen testifies:

“They recommend that one read everything that has been written by eminent physicians, yet not to implement everything immediately, *but also to evaluate beforehand whether it is possible to prove the claim of each of them in reality*”⁸⁴.

2. We have seen in what precedes that medical Empirism seems to correspond quite broadly to the characteristics which Michel Bitbol (In preparation), starting out from a Buddhist/phenomenological perspective, considers to be both most fruitful for solving today's outstanding unresolved scientific questions, and as most appropriate for avoiding the risk of global disbelief in science. By restricting itself to the phenomena, medical Empirism is free from any illusion that it has, or soon will, achieve a complete, demonstratively certain knowledge of reality as it is in itself: it is happy to acknowledge that best results it can hope for are only probable. It concentrates on the pragmatic questions of which medical cures are, most often, most effective for which illnesses, relying primarily on first-person eye-witnessing in the present, supplemented by trustworthy case histories from the past, and by methods of analogical extrapolation to deal with previously unknown cases. The Empirists' attempts to quantify the degrees of reliability and certainty of all three sources of data led to them to

⁸⁴ ἀλλὰ καὶ κρίνειν πρότερον, εἰ δυνατόν ἕκαστον αὐτῶν ἐστὶ τὴν ἐπαγγελίαν ἔργῳ ἐπιδείξασθαι, Fr. 60 Deichgräber = Galen, *De compositione medicamentorum secundum locos libri x*, vol. 13, p. 188, 7 f. Kühn, my translation. In evaluating the reports of *historia*, according to the Empirists, one must also take into account the methodology they use (they must focus on perceptible phenomena), the author's motives (they must not be motivated by the thirst for glory or the need to prove that they are right), and ethical character. Finally, reports from the past are to be granted more credibility in proportion as they agree with our own experience and with other reports; cf. Deichgräber 1965 p. 299-300; Von Staden 1975, 190. This is not the worst methodology one could propose for distinguishing between fake and genuine information on social media. It is reminiscent of the advice of Feyerabend (1981 p. 17), when he formulates what he calls the rules governing the relation between authority, experience and knowledge: “(i). Read what others have said about the things you are interested in, but don't trust them too much. (ii). Give due regard to the experience of your profession (...), however, do not rest content with this information and with these skills, but try to improve them! iii. Make assertions which are plausible in the light of (i) and (ii), for they alone contain a knowledge of things”.

develop a sophisticated methodology that included what was, if not a full-blown theory of experimental science, then certainly a promising anticipation thereof⁸⁵.

Yet the experimental science practiced and advocated by the Empirists is not Baconian. Their approach is not that which Hadot characterized as Promethean and Bitbol as transitive. Rather than actively (and sometimes violently) intervening on Nature, or, à la Kant, setting themselves up as judges who imperiously summon Nature to reveal her secrets, they sit back – much to Deichgräber’s dismay – and allow Nature to suggest answers to her own mysteries⁸⁶. In this sense, they point the way to an approach to experience in general, and scientific experimentation in particular, that is more akin to what Hadot called the Orphic approach, and Bitbol the transitive approach. Nature does indeed have something to teach us: but we can access these teachings not by putting her on the rack and torturing her, but by observing the way she works and attempting to imitate her procedures, in a humble, respectful, non-intrusive way.

Writing in 1930, Deichgräber characterized the Empiric approach in what he no doubt intended to be negative and dismissive terms. The entire attitude of Sceptical physician was, he wrote, “more that of a receptive than of a productive type of man”⁸⁷. The Empiric doctor “is a Sceptic in his outlook on life: he seeks to abolish his individuality”⁸⁸. Clearly, Deichgräber himself, who joined the Nazi Party in 1938, views these characteristics of the Empirics as character flaws, symptomatic of a decadent period of Greco-Roman Antiquity. Indeed, for Deichgräber, Empiric medical thought is a “manifestation from the late period of Greek culture, the precursor of unproductive eclecticism of post-Christian medicine”⁸⁹.

Today, 90 years later, we may agree that, at least to some extent, the Empirics practiced and advocated an approach to nature and to science characterized by openness and receptivity, and perhaps even a certain de-emphasis of their own individualist personalities. But we are no longer obliged to agree with Deichgräber that this is a bad thing. Perhaps the Empiric approach is more akin to a Goethean than to a Newtonian-Baconian approach to natural science: an

⁸⁵ For an interesting discussion of relations between logic, science and experience, and the suggestion that “we can, with some with some semblance of plausibility, suggest that the Empiricists were anticipating a non-standard logic of vagueness”, cf. Barnes 1982.

⁸⁶ For a modern echo of this view, cf. J. H. Lambert, *Neues Organon*, Bd. I, Leipzig 1764, sect. 599, who distinguishes between common experiences, in which nature speaks so loud that we cannot fail to hear her, and *experiments, in which we speak and nature answers*.

⁸⁷ Deichgräber 1965, p. 294 “seine ganze Haltung mehr die eines aufnehmenden als die eine produzierenden Menschentypus ist”. Likewise, Von Staden emphasizes, with similar pejorative intent, the “passivity” of the Empiric approach (1975, 189; 190; 192).

⁸⁸ “Er sucht seine Individualität auszulöschen”, p. 269. One may doubt this assertion: Heraclides of Tarentum (late 1st cent. BCE) stressed his own originality (Deichgräber p. 260), while later Empirics such as Menodotus of Nicomedia (early 2nd cent. CE) were infamous for their ferocious polemics against their contemporaries (cf. Perilli 2004, 91 ff.).

⁸⁹ Deichgräber 1965, p. 301.

approach that is contemplative, respectful, modest, non-intrusive, Orphic and intransitive, rather than the aggressive, exploitative, violent, Promethean-transitive attitude has been that has dominated the West for the past four centuries or so. And perhaps, in view not only of the current COVID pandemic but of the human degradation of the environment that largely caused it and that is responsible for countless other severe threats to human and global well-being, a return to a certain neo-Empirism, uniting critical scepticism with regard to the information we consume, careful adherence to a robust scientific methodology, and open receptivity to Nature. is just what the (ancient Empiric) doctor (s) ordered⁹⁰.

Conclusion

The apparent similarities between the Empirics' approach to medicine and Pierre Hadot's interpretation of ancient philosophy are worth noting. Both Hadot and the Empirics seem to have been struck by the fact that in many cases, similar practical results could be obtained by very different methodologies⁹¹. For Hadot, for instance, the fact that Epicureans and Stoics, radically opposed in most of their theories, both advocated the practice of the spiritual exercise of concentration on the present moment, suggested that the theoretical arguments used by ancient philosophical schools to justify their practical advice were, in some sense, secondary and epiphenomenal. Likewise, the Empirics, Celsus tells us⁹², also noticed that many similarly effective cures were prescribed by different medical schools, and justified by widely divergent theoretical considerations. Like Hadot, the Empirics concluded, *grosso modo*, that the use of reason was secondary in medicine, and that practical experience was the primary factor in prescribing successful medical therapy.

In both cases, these views met with fierce resistance from the partisans of Reason. As we have seen, many scholars still reject Hadot's interpretation of ancient thought as a betrayal of philosophy and its contamination by spiritual, religious or other para- or sub-philosophical tendencies, and Hadot himself was led, on many occasions, to qualify his views, stressing the co-dependence and inseparability of both lived, practiced philosophy *and* the rational, theoretical discourse that explains and justifies it. Similarly, the Empirics encountered the derision not only of their rationalist/dogmatist contemporaries, but also of many modern

⁹⁰ It would be worthwhile trying to pursue the reason why the scientific methodology of the Medical Empirists seems to correspond so closely to that which is recommended, quite independently, by Michel Bitbol. I suspect the historical answer may be the influence, common to both, of Buddhism, transmitted in the case of the Empirists by way of the sceptical thought of Pyrrho of Elis (E. Spinelli [*per litteris*] firmly rejects this possibility). Much further work would be required to confirm or reject this hypothesis.

⁹¹ Even a resolute denigrator of the Empirics such as Heinrich von Staden concedes, following Sabra, that "a scientist's methodological rules and theories often serve as no more than *machines de guerre* which can be directed against the adherents of rival theories but which often have little or nothing to do with his own scientific practice" (1975, p. 193).

⁹² Celsus, *On Medicine*, Prooem., 32; "men may hold different opinions on these matters, yet conduct their patients to recovery all the same" (qui diversa de his senserint, ad eandem tamen sanitatem homines perduxerint).

scholars, such as Von Staden, who renders them responsible for the decline in experimental thought said to have been inflicted on Greek medicine in the four centuries between Erasistratus and Galen.⁹³

What shall we make of these debates? This is not the place to evaluate Hadot's views⁹⁴, but are there any arguments to be made in favor of the Empirist position, at least in its later versions, more amenable to some role for reason? Could it be that the hegemony of Reason – as defined in the Western Europe from the 17th century onwards – requires some re-evaluation, not just in medicine, but in science as a whole?

Needless to say, such considerations far exceed the modest framework of the present contribution. I will merely conclude with a few contemporary examples that converge in the direction, not, of course, of a complete rejection of Reason in the context of the philosophy of science, but of a certain restriction, qualification, or limitation of its claims. Many have made such suggestions in the past, of course, from Paul Feyerabend⁹⁵ to Steve Fuller and Bruno Latour, some of whose pronouncements do indeed seem to lead to dismissing science as a mere sociological and ideological expression of the Will to Power⁹⁶. More sober is the position of Michel Bitbol, who, as we have seen, argues that while the claims of Buddhism must remain subject to empirical, scientific verification, modern Western science has a lot to learn from Buddhism. The refocusing of science in the direction of an emphasis on practical efficacy and humility with regard to claims of access to ultimate truth may, Bitbol believes, reduce the risk of the widespread rejection of science that often ensues today, when scientists are forced to abandon previous assertions in view of new findings.

I believe there is much to be said for Bitbol's views, but I also think the issues at stake go even deeper. What counts as knowledge? Is "scientific" knowledge – that which is rational, discursive and mathematically formulable – the only valid kind? Has the Western tradition in general, since the time of Plato and Aristotle, tended to overvalue such knowledge, to the detriment of other kinds of knowhow that are less susceptible of explicit rational/mathematical formulation? What about the knowledge embodied in arts and crafts? We seem to lack even the vocabulary to express what kind of knowledge is at work when a skilled carpenter builds a house, an Inuit carver produces an intricate sculpture in bone or ivory, or a veteran fisherman guides his boat

⁹³ There is reason to believe that the Empirists themselves may gradually have modified their position as time went on, evolving from a semi-fundamentalist rejection of any role for reason to the position of such 2nd cent. CE Empirist/Sceptics as Menodotus, who seems to have allowed for an increasingly important role for reason; cf. Frede 1990, 233-234. This question involves the thorny question of the meaning and function of what the later Empirists called *epilogismos*, which I cannot go into here, except to say that, *pace* Cariou, it does *not* seem to have been identical to the "transition from the similar" (*metabasis tou homoiou*); cf. Deichgräber 1965, 307 n.1; On *epilogismos* in the Empirics see, for instance Frede 1990, 227; Stok 1993, 637, and especially Perilli 2004, 140ff.

⁹⁴ See above, n. 00

⁹⁵ Feyerabend 1987.

⁹⁶ On the potentially dangerous implications of Latour's view that there are no "matters of fact", cf. Gabriel 2020, 24f.

through treacherous straits in a storm⁹⁷. In more than two thousand years, we have not made much progress beyond Plato and Aristotle, who dismissively classified such knowhow as taking place by “experience and familiarity” (*empeiriai kai tribêi*). Were they right to dismiss such manifestations of knowledge as a poor cousin of genuine, demonstrative, certain knowledge (*epistêmê*), on the grounds that only the latter is knowledge of the *why* as well as the *that*? Or is there something to be said for the Sceptic-Empiric rehabilitation of the knowhow embodied in the arts and crafts?

Certain trends in contemporary philosophy may point in this direction. Pierre Hadot tended to consider that his own view of philosophy was more compatible with the neo-pragmatic thought of Wittgenstein, Putnam and Stanley Cavell than with the postmodernist thought of Foucault, Derrida or Deleuze, which, he thought, represented a real devaluation of and danger to Reason⁹⁸. The work of Francesco Varela, his students and colleagues has recently led, on the one hand, to the trend of studies in embodied philosophy, which reacts against the Platonic trend to value reason so highly as to imagine that the inferior body is nothing but an impediment to the pure functioning of the immaterial, incorporeal Mind. On the other hand, Varela, due to his interest in Buddhism, is also one of the figures at the origin of what has come to be known as Contemplative Studies, which unites practitioners of cognitive science and neurobiology, phenomenologists, and philosophers of science in an attempt to understand the nature and variety of cognition and its neural correlates, taking into account not just “Reason” but the entire human organism as it interacts with its environment.

The question toward which many of these contemporary trends seem to converge is thus the old one: What is thinking? , a question which deserves to be taken up again, from a perspective that is no longer exclusively Heideggerian. Do only those words which we hear ourselves think, and can subsequently write down and perhaps translate into mathematical symbols, count as thinking? What about the faculties which Ralph Waldo Emerson spoke of as our “lowly listening”⁹⁹? The neurobiologist and Zen practitioner James Austin has described these faculties as our normal, autonomous, affirmative capacities of memory, those circuits which “enable large parts of our brain to act intelligently, involuntarily, and with high degrees of reflexive autonomy”¹⁰⁰, and which constitute our “automatic pilots”¹⁰¹. in the sense that we are not

⁹⁷ Cf. Feyerabend 1981, 17, who speaks of the need to balance rational judgement by “an appeal to experience. This second and most important source of knowledge (...) is (...) the changing ability of the professional to deal with his surroundings; it uses the *schooled eye*, the *practised hand* of the artisan, the navigator, the artist and it develops with his craft”.

⁹⁸ More precisely, Hadot thought that postmodern thought in general represented an instance of the tendency of intellectuals to “be satisfied with discourse” (Hadot 2020, p. 7), elaborating eloquent, rhetoric discourses that become increasingly remote from the practical interests of non-Academics (cf. Hadot 2004, 279f.). In such cases, Hadot argued, philosophy had been reduced to talk *about* philosophy rather than actually doing philosophy. I have argued that the same may be true of certain tendencies of contemporary Analytic philosophy: cf. Chase 2013.

⁹⁹ Emerson, *Spiritual Laws* 99, in *Essays*, New York 1951: “There is a guidance for each of us, and by lowly listening we shall hear the right word”.

¹⁰⁰ Austin 2011, 108-110. The circuits in question are those that enable communication between the frontal lobes of the cerebral cortex, responsible for our “executive functions” of rational discursivity, and the limbic regions of the thalamus and the basal ganglia.

usually aware of their functioning. Austin, following the Zen tradition, believes that these pre-verbal sources of information, originating from the limbic regions that underlie our rational cerebral cortex, may constitute under-exploited sources of wisdom:

“When their soft, coded voices inform our lowly listening”, he writes, “we’re guided in the tacit direction towards virtues that we sometimes call our “better Selves”¹⁰².

Many, many questions remain unanswered, of course. Do such sources of pre-conscious wisdom actually exist? What is their neural basis? Can they be accessed by various techniques of meditation, and if so, what are the physiological modalities and health-related effects of such access? What is the relation of such modes of thought to the pre-conscious embodied wisdom displayed by expert artists and craftspersons? How are they related to the traditional wisdom embodied in the mythology, art, and cultural practices of Indigenous and non-Western peoples throughout the world? How, if at all, are such modes of thought related to those of other members of the animal kingdom, and perhaps even of plants?¹⁰³ To what extent do all these forms of cognition interact with the environment, and with Nature as a whole?

Finally, might these questions and their eventual findings contribute to the discovery of what long been called for: a new kind of science¹⁰⁴, one which is no longer reductionist but which takes into account chaos theory, complexity studies, and perhaps some form of the Gaia theory¹⁰⁵ of the earth as an autonomous, self-regulating whole? And might such a future science, should it ever come to fruition, be less intrusive, adversarial, objectifying and exploitative in its attitude to Nature? Might it take the form of the Empiric approach of waiting for nature to answer the questions she herself raises through our intermediary? Might it be Goethean¹⁰⁶ rather than Newtonian, resembling Hadot’s Orphic attitude and Bitbol’s intransitive approach to Nature, more than the Promethean-transitive approach that has long dominated the West and has led humankind to the brink of global disaster?

¹⁰¹ Cf. Austin 1998, 363 on the “sophisticated precognitive operations” that “allow the jazz musician to take off from his familiar terrain of melody, and wing it on impossible flights of improvisation”.

¹⁰² Austin 2011, p. 110.

¹⁰³ The study of plant intelligence is a growing discipline in universities and research institutes throughout the world; its findings may well force us to reevaluate of definitions of thinking and consciousness. For a popular introduction, cf. Wohlleben 2016. Cf. already Empedocles, Fr. D 257 in *Early Greek Philosophy, Volume V: Western Greek Thinkers, Part 2*, Edited and translated by André Laks & Glenn W. Most, Cambridge, MA: Harvard University Press, 2016 = Sextus Empiricus, *Against the Mathematicians*, 8.286: “But Empedocles, still more paradoxically, held that all things are rational, and *not animals only but plants as well*, as he writes expressly— ‘Wisdom and power of thought, know thou, are shared in by all things’ (Translation R. G. Bury in Sextus Empiricus, *Against the Logicians*, Cambridge, MA: Harvard University Press, 1935).

¹⁰⁴ Cf. Wolfram 2002, Prigogine & Stengers 1986.

¹⁰⁵ Cf. Chase 2020, 68-69.

¹⁰⁶ For the *rapprochement* of Goethe and the Empirics, cf. Von Staden 1975, 193, who accuses the latter of “closing the door to experimentation”. For more sympathetic studies of Goethe’s attitude toward the study of nature, see , for instance, Hadot 2006, index s.v.; Hadot 2008; Seamon & Zajonc, eds., 1998

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