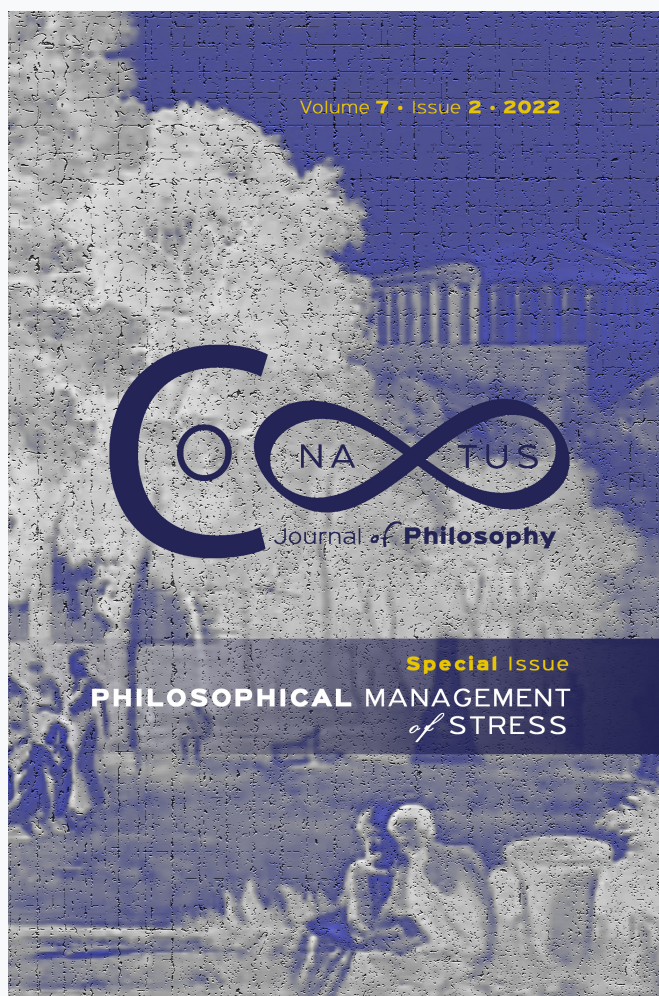


Conatus - Journal of Philosophy

Vol 7, No 2 (2022)

Conatus - Journal of Philosophy SI: Philosophical Management of Stress



Philosophical Management of Stress: An Introduction

Christos Yapijakis

doi: [10.12681/cjp.31823](https://doi.org/10.12681/cjp.31823)

Copyright © 2022, Christos Yapijakis



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0](https://creativecommons.org/licenses/by-nc/4.0/).

To cite this article:

Yapijakis, C. (2022). Philosophical Management of Stress: An Introduction. *Conatus - Journal of Philosophy*, 7(2), 7-31. <https://doi.org/10.12681/cjp.31823>

Philosophical Management of Stress: An Introduction

Christos Yapijakis

National and Kapodistrian University of Athens, Greece

E-mail address: cyapi@med.uoa.gr

ORCID iD: <https://orcid.org/0000-0001-6695-186X>

Abstract

All human needs are compromised by everyday stressful conditions, which may be objectively devastating or subjectively augmented due to idiosyncratic way of thinking. Unmanaged acute stress can affect emotions, thinking and behavior and chronic stress can result in several severe health problems. Philosophy may provide a frame of thinking that may help in managing everyday stress. There are personal dimensions in the philosophical management of stress based on examples of Aristotle's eudaimonia consisted of morality and pleasure, Plato's transcendence aiming to join with the supreme good, Pyrrho's serenity through suspension of judgement and the Stoics' rational attachment to virtue. Furthermore, there are social dimensions of philosophical management of stress, since there is abundant scientific evidence that stress affects moral decision-making and therefore an ethical theory of life may not be sufficient in stressful conditions. In this context, such social aspects include the relationship of eudaimonia with community life, the artistic practice and the virtual eroticism in the contemporary world of digital media as a stress relief from physical confrontation with other persons in real life, the empathy and care as a crucial quality for stress relief and social change, as well as the Epicurean approach of stress management that may have both personal and social utility. Intervention programs of stress management combining many lifestyle techniques have been shown to enhance resilience and decrease stress for a period of time, based on systematic behavioral change. Two successful novel empirical pilot studies of pure philosophical management of stress based on cognitive psychotherapy and modification of mentality have been presented, both of them realized in the COVID-19 pandemic period: a three-month positive psychology intervention combined with Epicurean and Stoic concepts was provided to adolescent students and a month-long philosophical management of stress program based on Science and Epicurean Philosophy was offered to public sector professionals.

Keywords: *human needs; stress management; eudaimonia; pursuit of happiness; Aristotle; Plato; Pyrrho; Epicurean philosophy; Stoicism; positive psychology; cognitive psychotherapy; sociology*

I. Introduction

According to Maslow, the hierarchy of human needs includes a) basic needs that are physiological (food, water, warmth, rest) and related to safety/security, b) psychological needs related to love/belonging (intimate relationships, friends and family) and esteem (feeling of accomplishment, dignity, self-respect and prestige), and c) self-actualization needs related to personal fulfilment (achieving one's full potential, creative activities).¹ All these human needs are compromised by everyday stressful conditions. Stress is a state of mental or emotional strain resulting from adverse or demanding circumstances, which may be objectively devastating or subjectively augmented due to idiosyncratic way of thinking.² Stressful situations that are not managed properly can affect emotions, thinking and behavior. Chronic stress can create several health problems, including high blood pressure, cardiovascular disease, depression, anxiety disorder, obesity and diabetes.³

It follows that the management of stress is a human need, a fact that the whole humanity has realized empirically during the recent period of the COVID-19 pandemic.⁴ If people are not resilient to everyday stress, they may have emotional and mental problems in their present and severe psychosomatic health problems in the future. According to the World Health Organization (WHO, established in 1948), "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."⁵ That definition of health corresponds very well with Epicurus' description of the state of happiness (eudaimonia) as absence of mental

¹ Andrew J. Hale, Daniel N. Ricotta, Jason Freed, Christopher C. Smith, and Grace C. Huang, "Adapting Maslow's Hierarchy of Needs as a Framework for Resident Wellness," *Teaching and Learning in Medicine* 31, no. 1 (2018): 109-118.

² George P. Chrousos, "Systems Biology and the Stress Response: From Pythagoras and the Epicureans to Modern Medicine," *European Journal of Clinical Investigation* 42 (2012): 1-3.

³ George P. Chrousos, "Stress and Disorders of the Stress System," *Nature Reviews Endocrinology* 5, no. 7 (2009): 374-381.

⁴ Cyril Emeka Ejike, "COVID-19 and Other Prevalent Diseases in Africa: A Pragmatic Approach," *Conatus – Journal of Philosophy* 6, no. 1 (2021): 33-59; Michael Anderson, Susan Leigh Anderson, Alkis Gounaris, and George Kosteletos, "Towards Moral Machines: A Discussion with Michael Anderson and Susan Leigh Anderson," *Conatus – Journal of Philosophy* 6, no. 1 (2021): 177-202; Roberto Andorno, and George Boutlas, "Global Bioethics in the Post-Coronavirus Era: A Discussion with Roberto Andorno," *Conatus – Journal of Philosophy* 7, no. 1 (2022): 185-200; Dimitrios Dimitriou, "Corporate Ethics: Philosophical Concepts Guiding Business Practices," *Conatus – Journal of Philosophy* 7, no. 1 (2022): 33-60.

⁵ World Health Organization, "Constitution of the World Health Organization – Basic Documents, 45th edition," October 2006, <https://www.who.int/publications/m/item/constitution-of-the-world-health-organization>.

agitation (ataraxia) and absence of physical pain (aponia).⁶ It is self-evident that “the pursuit of happiness is a fundamental human goal” as clearly stated in the United Nations resolution 66/281, which was adopted by the General Assembly on June 28, 2012. The means to successful pursuit of happiness is the recognition of common stress symptoms and their management.

Philosophy may provide a frame of thinking that may help in managing everyday stress. Socrates claimed that an unexamined life is not worth living⁷, which is clearly an exaggeration. Nevertheless, Socrates was right that introspection and examination of one’s life from time to time may prompt positive corrections, as Pythagoras had previously suggested. Furthermore, Epicurus warned that a happy life without agitation is impossible without some basic scientific knowledge of nature.⁸ The Athenian philosopher emphasized that philosophy is useful only when it soothes the turmoil of the soul.⁹

There are several philosophical approaches that can be used for management of stress, but their effect depends on their relation to real life. Idealistic approaches of stress management may include philosophical, religious, political and social beliefs that may provide short-term security from anxiety or even escape practices from the contemporary world that may provide physically or virtually a stress relief from real life conflicts. An idealistic approach is based mainly on how strong is the belief in it and the short period of time in which there is no major disentanglement by real life events. In the longer period of time, the inevitable reality shock may cause devastating results ranging from disappointment, burnout and depression to life threatening thoughts. On the other hand, there is accumulating evidence that indicate the stress management efficacy and utility of pragmatic philosophical approaches such as Epicurean, Aristotelian or Stoic ones that are compatible with observations of Science, as well as with practices of Cognitive Behavioral Psychotherapy and Positive Psychology. Intervention programs of stress management that combine the reinforcing role of pragmatic philosophical framing may result in beneficial cognitive reconstruction and mental well-being of people, especially in eras of crisis, such as the recent COVID-19 pandemic.

⁶ Christos Yapijakis, “Ancestral Concepts of Human Genetics and Molecular Medicine in Epicurean Philosophy,” in *History of Human Genetics*, eds. Heike I. Petermann, Peter S. Harper, and Susanne Doetz (Cham: Springer International Publishing AG, 2017), 41-57.

⁷ Plato, *Apology of Socrates*, 38a 4.

⁸ Epicurus, *Principal Doctrine* XII (Diogenes Laertius, *Lives of the Eminent Philosophers*, 10:143).

⁹ “Empty is the word of that philosopher that cannot cure any human passion. As medicine is of no use if it does not cure the diseases of the body, so philosophy lacks utility if it does not cure the passions of the soul” (Epicurus, cited in Porphyry, *Letter to Marcella* 31).

II. Personal dimensions of the philosophical management of stress

The philosophical management of stress has its personal dimensions, since every thinking individual is using a guiding philosophical theory of life.¹⁰ As Epictetus famously mentioned: “People are disturbed not by the things that happen, but by their opinion of the things that happen.”¹¹ In this context, Pia Valenzuela, Albrecht Classen, Nikos Dimou, and Panagiotis Kormas have presented respectively an Aristotelian, a Platonic, a Pyrrhonic and a Stoic dimension of stress management.

Pia Valenzuela discusses Barbara Fredrickson’s approach of human flourishing through positive emotions and Aristotle’s *eudaimonia*.¹² Valenzuela mentions that Fredrickson’s theory of positive emotions is “at the crossroads of Philosophy and Psychology, the connection of happiness – well-being – and affective states.”¹³ According to observations of Fredrickson and colleagues, “existing data suggest that hedonia and eudaimonia are not only positively correlated but that aspects of hedonia predict and even cause increases in eudaimonia prospectively.”¹⁴ In particular, Positive Psychology research has indicated that:

[...] positive emotions and purpose – hedonia and eudaimonia –, as theory and evidence suggest, are not merely facets of living well. Instead, they function as active ingredients that help maintain and strengthen biological systems that support upward spirals of well-being.¹⁵

Studies have shown that:

[...] people who flourish generally responded with a more considerable ‘boost’ in positive emotions in response to everyday, pleasant events as helping others, social interactions, playing, learning and spiritual activity.¹⁶

¹⁰ Massimo Pigliucci, Skye C. Cleary, and Daniel Kaufman, eds., *How to Live a Good Life: A Guide to Choosing your Personal Philosophy* (New York: Vintage Books, 2020); see also Alexander Nehamas, et al., “A Good Life: Friendship, Art, and Truth,” *Conatus – Journal of Philosophy* 2, no. 2 (2017): 115-121.

¹¹ Epictetus. *Encheiridion*, 5:1.

¹² Pia Valenzuela, “Fredrickson on Flourishing Through Positive Emotions and Aristotle’s Eudaimonia,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 37-61.

¹³ *Ibid.*, 37.

¹⁴ *Ibid.*, 44.

¹⁵ *Ibid.*, 46.

¹⁶ *Ibid.*, 46.

Valenzuela emphasizes that there are:

[...] two fundamental tenets in Fredrickson’s theory [...]. First, positive emotions do not simply mark well-being but play a role in creating it. [...] Second, positive emotions are related to hedonic and eudaimonic aspects of flourishing.¹⁷

Furthermore, in accordance to Fredrickson the author notices that: “[...] Aristotle defends that a noble and virtuous life is in itself pleasant” since “a sign of being a good person is to rejoice in good actions and with all that is noble.”¹⁸

Valenzuela remarks that “morality and pleasure come together within Aristotle’s eudaimonia,” but unlike Aristotle “in Psychology, most authors maintain neutral-value accounts.”¹⁹ Valenzuela discusses various views on the subject which rests on “the tension between the subjective and objective aspects of happiness.”²⁰ The author mentions that “well-being has a subjective dimension but rather emphasise transcending subjectivity (i.e., physical health, purposeful activity, observable joy).”²¹ Valenzuela offers her plausible opinion that “at least for the deep and enduring happiness Aristotle bears in mind moral and intellectual virtues are required.”²²

Albrecht Classen discusses the example of Boethius’ philosophical reflections as a paradigm for management of stress in our modern life.²³ The author first mentions:

[...] the famous “Serenity Prayer” originally formulated by the German-American theologian Reinhold Niebuhr (1892-1971), to meditate on a regular basis on the meaning of all existence, to explore our emotions and to come to terms with them peacefully, to organize all our actions in a calm way so as to avoid stress resulting from time and other conflicts, or to reduce our dependency on material conditions [...].²⁴

¹⁷ Ibid., 48.

¹⁸ Ibid., 52.

¹⁹ Ibid., 55.

²⁰ Ibid., 56.

²¹ Ibid.

²² Ibid., 57.

²³ Albrecht Classen, “Management of Stress Through Philosophical Reflections: Teachings by Boethius for Our Modern Life,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 63-78.

²⁴ Ibid., 63-64.

Subsequently, Classen admits that:

[...] stress cannot be overcome through blind faith; stress is human-made and self-imposed, so it is up to us as humans to come to terms with it and to develop effective strategies to handle this unnecessary psychological problem effectively.²⁵

The author mentions the work *Consolations of Philosophy* written in 524 or 525 AD by imprisoned Boethius at a period when he was facing the death penalty. The work is presented “as a critically important approach to stress management.”²⁶ Classen describes how:

[...] Boethius explores the profound question of what constitutes human life and what parameters we need to operate effectively and happily during our existence in order to achieve at least a modicum of happiness.²⁷

Boethius imagines that Philosophy as entity enters his cell:

[Philosophy] lays the foundation for a fundamental change of his mind, his attitude, and his perception of life in the larger context. All of his stress proves to be the result of his shortsightedness and blindness regarding the inner realities of this life.²⁸

Classen remarks that,

Philosophy helps [Boethius] to understand that practically all forms of happiness traditionally identified in life would be only superficial and unreliable [... that] life is never ideal or perfect since it is moving away from the state of perfection and goodness [... and ultimately that] our existence is the natural and perpetual endeavor to join with the supreme good – summum bonum, sometimes translated as God.²⁹

²⁵ Ibid., 64.

²⁶ Ibid., 66.

²⁷ Ibid., 69.

²⁸ Ibid., 70.

²⁹ Ibid., 71-73.

The author concludes that “stress arises because the individual does not understand the larger picture of life, determined by the fundamental drive toward happiness as defined by Philosophy.”

Nikos Dimou (eminent Greek author, and one of my favorite modern thinkers) discusses the influence of Indian Buddhism on Greek Skepticism in his article “The two ‘Greek Buddhas.’”³⁰ Dimou mentions:

Pyrrho of Elis had travelled to the East, following Alexander the Great and his court of learned men, and had met with the leading thinkers of India. It is more than probable that Pyrrho met with the disciples of Buddha. Coming back to Greece, Pyrrho became the originator of the post Aristotelian thought. The school of the Sceptics, which he founded, was the first. Epicureans and Stoics followed.³¹

The author remarks that there are many parallels in Buddhism and Skepticism, since “excerpts from early Buddhist Sutras and Sextus Empiricus’ texts match perfectly” and the Buddhist philosopher Chandrakirti’s notion of emptiness (*sunyata*) is an analog of the Greek *epoche*, the suspension of judgement, the act of abstaining from affirmation or negation on any matter.³² Dimou emphatically mentions that suspension of judgement “was Pyrrho’s method to fight stress, angst and fear. He was the one who coined the word *ataraxia*, which became the leading value in all Hellenistic Philosophy.”³³ The influence of Buddhism on Pyrrho was “the subject of two books with similar titles mentioning the ‘Greek Buddha,’ as Pyrrho was called by Nietzsche.”³⁴ The first book was written in Greek by Dimou in 1984, while the other was written in English by Christopher I. Beckwith in 2015.³⁵ Both books “discussed the similarities of the Eastern and the Western tradition regarding the goal of serenity, *ataraxia*.”³⁶ Dimou maintains that “both traditions offer a practical way of philosophical management of everyday

³⁰ Nikos Dimou, “The two ‘Greek Buddhas,’” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 79-86.

³¹ *Ibid.*, 81.

³² *Ibid.*, 84.

³³ *Ibid.*, 82.

³⁴ *Ibid.*, 79.

³⁵ Nikos Dimou, *The Greek Buddha* (Athens: Nefeli Publications, 1984); Christopher I. Beckwith, *The Greek Buddha: Pyrrho’s Encounter with Early Buddhism in Central Asia* (Princeton, NJ: Princeton Press, USA, 2015).

³⁶ Dimou, “The two ‘Greek Buddhas,’” 79.

stress and suffering through the mentality of suspension of judgement and non-attachment to certainties.”³⁷

Panagiotis Kormas discusses the point that cognitive philosophical theories of Stoicism stand at the center of the contemporary neuropsychological treatments.³⁸ Kormas mentions “the relevance of Hellenistic thought to psychotherapy” and remarks that recently “Stoic philosophy in particular has experienced great popularity,” because “a parallel between the modern psychotherapist and the ancient Stoic philosopher has been drawn” since “both recognise reason as a mediator between environmental stimuli and human emotional responses.”³⁹ The author observes that “Aaron Beck, who has been called the father of Cognitive Therapy, has openly acknowledged the Stoic origin of this theory” and explains that since “maladaptive cognitions involve general beliefs and generate specific and automatic thoughts about situations” it follows that “treatment protocols for maladaptive cognitions ultimately modify emotional disturbance and problem behaviours.”⁴⁰ Kormas asserts that “this therapeutic intervention is the methodology followed by Stoicism; the therapeutic effect comes through the rational judgments which are part of the functions of the ruling faculty.”⁴¹ The author mentions:

[...] Stoic psychology is closely related to the theory that no separation exists between the rational and non-rational parts of human psychology. This means that emotions and desires can be continuously shaped and reshaped via changes in beliefs.⁴²

Kormas discusses how “a series of philosophical approaches are now recognized in modern psychotherapy,” including “the Socratic method of questioning and control,” “Epictetus’ cognitive distancing (detachment),” “the Stoic vigilant self-consciousness (attention),” and its closely related to “focusing on here-and-now.”⁴³ The author concludes: “Stoicism promotes a life-long process in which the individual is responsible for using reason” and that approach may be effective because scientific research has shown that “rational and non-rational aspects of human psychology are not separate,

³⁷ Ibid.

³⁸ Panagiotis Kormas, “Stoic Cognitive Theories and Contemporary Neuropsychological Treatments,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 87-102.

³⁹ Ibid., 88.

⁴⁰ Ibid., 90-91.

⁴¹ Ibid., 92.

⁴² Ibid.

⁴³ Ibid., 97.

thereby permitting active engagement in logical remodeling and moral development.”

III. Social dimensions of the philosophical management of stress

The philosophical management of stress has its social dimensions. The ethical set of principles of a guiding philosophical theory of life when the moral person is interacting with others may not be sufficient in stressful conditions. There is growing evidence from Experimental Psychology research that both stress and stress-related increases of cortisol affect moral decision-making.⁴⁴ As Epicurus famously emphasized: “It is impossible to live pleasantly without living prudently, well and justly, as well as it is impossible to live prudently, well and justly without living pleasantly.”⁴⁵ In this context, the social dimension of eudaimonia was presented by Emmanuel Roberto Goffi; the artistic practice in the virtual eroticism in the contemporary world of mass media as a stress relief from physical confrontation with other persons in real life was conversed by Luka Janeš, Vanja Novaković, and Tanja Todorović; the virtual experience of pornographic images via digital media and on the internet as a means of managing and reducing stress that stems from one’s social interactions by George Arabatzis; the empathy and care as a crucial quality for stress relief and social change was proposed by Darija Rupčić Kelam and Ivica Kelam; the Epicurean approach of stress management that may have both personal and social utility was discussed by George P. Chrousos and me.

Emmanuel Roberto Goffi supports the notion that the contemporary COVID-19 pandemic crisis has taught humanity the limits of individualism and underlined the fact that the pursuit of eudaimonia is a social issue.⁴⁶ Goffi notices:

[...] with the rise of socio-physical distancing imposed due to the pandemic, people around the world have experienced isolation and the lack of human contact and interaction [that] has led to an increase in mental health issues.⁴⁷

⁴⁴ Nina Singer, Monika Sommer, Katrin Döhnel, Sandra Zänkert, Stefan Wüst, and Brigitte M. Kudielka, “Acute Psychosocial Stress and Everyday Moral Decision-making in Young Healthy Men: The Impact of Cortisol,” *Hormones and Behavior* 93 (2017): 72-81.

⁴⁵ Epicurus, *Principal Doctrine V* (Diogenes Laertius, *Lives of the Eminent Philosophers*, 10:140).

⁴⁶ Emmanuel Roberto Goffi, “Back to Eudaimonia as a Social Relation: What Does the Covid Crisis Teach Us about Individualism and its Limits?” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 105-118.

⁴⁷ *Ibid.*, 105.

The author emphasizes that “[...] the pandemic has shed a light on the limits of the individualism” and the erroneous concept of “a solipsistic world in which there would exist no reality, no truth outside individuals’ perceptions.”⁴⁸ Goffi observes that:

[...] even if we do not want to admit it, we feel the limits of our opinions in time of crisis. Doubt leads to uncertainty and uncertainty to anxiety. Doubting everything can be very uncomfortable and lead to mental health issues.⁴⁹

The author adds:

Denying any truth that derives from our perceptions is dangerous for it closes us out of otherness. [...] Moving back to Aristotelian ethics, which founds *eudaimonia* on relations between humans, might help us overcome our concerns and anguishes.⁵⁰

Goffi concludes that

Managing stress is, then, not only related to the improvement of individuals’ environment and providing them with solutions. It is also to teach them, through philosophy, to challenge themselves, to confront others, and to reconnect with *eudaimonia* through social relations.⁵¹

Tanja Todorović, Luka Janeš, and Vanja Novaković present a manifold of mimesis in the age of simulation examining the interconnection of aesthetics, soul (psyche) and media, by discussing artistic practice in the contemporary world of media as a stress relief from physical confrontation with other persons in real life.⁵² The authors mention that “the contemporary world of media can be considered in dialogue with the philosophical tradition, can be evaluated in the phenomenological psychopathology evaluation horizon (Fuchs),” and can be understood by “the notion of variation (Manovich) replacing the traditional notion of mimesis” known from “Plato’s ontology”

⁴⁸ Ibid.

⁴⁹ Ibid., 112.

⁵⁰ Ibid., 112, 116.

⁵¹ Ibid., 116-117.

⁵² Tanja Todorović, Luka Janeš, and Vanja Novaković, “Aesthetics, Psyche and Media: A Manifold Role of Mimesis in the Age of Simulation,” *Conatus – Journal of Philosophy* 7, no 2 (2022): 119-141.

and “Aristotle’s constitution of education and community.”⁵³ Todorović, Janeš, and Novaković claim that “only avant-garde movements can be the antithesis of the mass culture” in a comparable way to the one that the “Romantic movement challenged the traditional educational systems” by questioning “the traditional way of understanding the truth, especially in the domain of the philosophy of art.”⁵⁴ The authors discuss the view that:

[...] the new media represent the extension of reality, [since] every critique, every affirmation, every truth, and every lie, immediately enters into the common area of intervention. [...] There is no neutral content because every new piece of data produces new fields of action [by] reproduction and repetition.⁵⁵

Todorović, Janeš, and Novaković mention:

[...] artistic practice in new digital media that allows maintenance of desired (identity) simulations, enabling subjects to express their individuality, as well as in searching for new ways to improve their quality of life.⁵⁶

Nevertheless, the authors remark that the perception of “an embodied and extended consciousness is not quite possible in the domain of simulacra, or more precisely, it is blocked and antagonized in many ways”⁵⁷ and therefore they wonder:

[...] whether the “avatar issue” represents the reduction and closure of the width of a person’s beingness within the set image, or whether it facilitates and stimulates its realization by depriving them of the stress and discomfort that is caused by physical confrontation and intercourse with other persons in the living space?⁵⁸

Todorović, Janeš, and Novaković notice that “the given issue inevitably points to the problem of the general narcissism of our culture, calling upon

⁵³ Ibid., 122.

⁵⁴ Ibid., 123.

⁵⁵ Ibid., 125.

⁵⁶ Ibid., 119.

⁵⁷ Ibid., 133.

⁵⁸ Ibid., 135-136.

philosophical orientation to enter the discussion.”⁵⁹ Particularly illuminating is the authors’ comment on the concept of “post-truth, interpreted as an adjective referring to a communication paradigm in the 21st century in which: ‘I think, therefore, I exist’ is replaced by ‘I believe, therefore I am right.’”⁶⁰ The authors suggest that “the phenomenological method [...] perhaps reveals in the best way the deep connection of these processes in a common virtual space although they act separately.”⁶¹ The authors claim:

[...] new identities are created in a chain of intersubjective relations in which the questions of truth and falsehood, simulacrum and simulation, such as the differences between original and the copy content are left aside in these considerations. In this new age, emphasis is placed on important ways in which singular identity interferes with others, while traditional ontological questions are left aside.⁶²

The authors conclude that,

new forms of education that operate through these new media and virtual spaces cannot necessarily be labeled as something negative overall but that all their effects should be examined in relation to the contextual situations in which they operate.⁶³

George Arabatzis discusses the obsessive viewing of pornography in digital media and on the internet as a means of managing and reducing stress.⁶⁴ The author examines

[...] the weight of the specific factor of representation in relation to stress and its alleviation through pornographic viewing by individuals [...] The relevant process can be seen in the relation of pleasure and pain in the obtainment of the first by the diminution of tension in Freudian psychoanalysis.⁶⁵

⁵⁹ Ibid., 119.

⁶⁰ Ibid., 130, n. 28.

⁶¹ Ibid., 138.

⁶² Ibid., 138-139.

⁶³ Ibid., 139.

⁶⁴ Georgios Arabatzis, “Pornography and Stress,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 143-156.

⁶⁵ Ibid., 143-144.

Arabatzis remarks that:

[...] the modern psychoanalysis is, for its part, right in arguing that the father of psychoanalysis abandoned biological reductionism, adopting a more structural and therefore more autonomous conception of his psychological and cultural analyses.⁶⁶

Arabatzis underlines the fact that according to Freud “the symptom becomes an element of personality, and this is an idea extremely suitable for understanding the compulsory viewing of pornography.”⁶⁷ The author mentions that “realism in pornography is highlighted according to its position in the systems of representation of a historical era,” and “film is an exemplary art of modernism.”⁶⁸ Arabatzis emphasizes the point that “what distinguishes today’s special effects from simple animation is the presence of the human body, which serves as a point of validation of realism.”⁶⁹ Nevertheless, the author questions the essence of the reality cinema:

[...] it is not the body-idea that has been realistically depicted on film, endowed with the ontological fluency of the realistic depiction of the world. The alibi-body of digital special effects is a second body into which the existence of the actor’s physical body has been transfused. This is clearly shown in the title and theme of James Cameron’s recent film, *Avatar* (2009). The word avatar comes from the Sanskrit avatara meaning ‘transition into a new flesh,’ in other words, reincarnation.⁷⁰

Furthermore, Arabatzis argues that:

[...] we ought to speak here of New-age spiritualism where the disembodiment of the physical body is achieved in cyberspace which resembles the Platonic supercellular country. In other words, it is a techno-spiritualism that does not constitute a renunciation of the body according to the ascetic spirit, but a digitalisation of the body. The cyberspace body obeys a body

⁶⁶ Ibid., 145.

⁶⁷ Ibid., 146.

⁶⁸ Ibid., 149.

⁶⁹ Ibid.

⁷⁰ Ibid.

philosophy and a meta-physiology. Mechanism, theosophy and sci-fi culture intertwine and coexist while cyberculture moves from counter-culture to mythical reductionism and technomysticism.⁷¹

The author observes that:

[...] in the digital space, virtual immateriality is combined with the ontic identity of the body through a discourse that invokes myths. It is a decontextualized and narcissistic reinvention of the themes of Mary Shelley's *Frankenstein*: electricity as a magical force expressed in strange radiations that create new bodies. This constitutes the new form of dealing with anxiety through pornography. The mythical dimension of digital bodies facilitates the anti-stress magic. Thus, technology appears as an anti-stress warrant through pornography.⁷²

Furthermore, Arabatzis discusses the anti-stress function of pornography in the light of the psychoanalytic theory of motivation: "There are two kinds of drives: (a) self-preservation and (b) sexuality. The latter drives are structured by an energy called *libido*."⁷³ The author continues:

[...] from here we can deduce the Pleasure Principle, which means the maximum de-escalation of the urges and thus the reduction of stress. The Pleasure Principle is subject to the modifications imposed by the Reality Principle.⁷⁴

Arabatzis discusses the psychoanalytic theory that "sexual drives may be repressed in the unconscious" because through "idealization" the "satisfaction of the initial sexual targeting can be removed through a rationalizing calculation combined with some ego excellence and thus substitute immediate satisfaction."⁷⁵ The author mentions that "through psychoanalysis, one can put forward the idea that ideas are rationalized impulses," that "we cannot overlook the unconscious element at the theoretical level where one understands 'perfectly' the phenomenon of the production of ideologies,"

⁷¹ Ibid., 150.

⁷² Ibid., 150-151.

⁷³ Ibid., 151.

⁷⁴ Ibid.

⁷⁵ Ibid., 152.

and that “to coercion is added the libidinal appetite of common people.”⁷⁶ Arabatzis thinks that in modern societies the cultural mechanism of socially acquired behavior corresponds to “the path from technology to the libidinal structure and to the intellectual sphere.”⁷⁷ The author concludes thus:

Pornography has to do with stress inasmuch as this last is at the origin of the first, while feelings of anxiety are the result of what we would call the hedonic failures that contaminate a social Being [...]. The pornographic phenomenon is not homogeneous but proportional to the stress that triggers it [...]. Realism appears thus as a factor of stress management in the form of pornography.⁷⁸

Darija Rupčić Kelam, and Ivica Kelam propose that empathic care is a crucial quality for stress relief and social change.⁷⁹ The authors pose the main question of basic human nature: “Are we humans inherently selfish and aggressive beings, or are we more likely empathic, tender, and careful?”⁸⁰ Rupčić Kelam, and Kelam notice:

More and more findings present a new interpretation of the history of civilisation by looking at the empathic evolution of the human race and nature and the profound ways it has shaped our development.⁸¹

The authors mention:

[...] the ethical and philosophical implications which appeared within the context of scientific discoveries [...] led to the birth of a new field of science, namely neuroethics, [...] that empirically investigates the biological basis of ethical thought and behaviour.⁸²

⁷⁶ Ibid., 154.

⁷⁷ Ibid.

⁷⁸ Ibid., 155.

⁷⁹ Darija Rupčić Kelam, and Ivica Kelam, “Care and Empathy as a Crucial Quality for Social Change,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 157-172.

⁸⁰ Ibid., 159.

⁸¹ Ibid., 159.

⁸² Ibid., 160.

Rupčić Kelam, and Kelam underline the fact that:

[...] the contemporary research exploring the connections between the brain and morality proves that the idea of a biological basis of morality has to be considered, as Aristotle and Epicurus taught by observing human nature.⁸³

The authors think that the biological basis of morality obviously lies in:

[...] empathy [...] conjures up active engagement [...] the willingness of an observer to become part of another's experience [...] of walking in someone else's shoes, understanding of emotions of other beings and using that understanding for channelling one's behaviours and acts.⁸⁴

Nevertheless, the authors mention that "care is the first step and precondition to empathy that is much more comprehensive and profoundly richer than care,"⁸⁵ since:

[...] empathetic extension is the awareness of the vulnerability we all share and allows an individual to experience another's plight or condition "as though it were one's own" and that involvement itself also loops back to reinforce and deepen one's sense of selfhood because he has been there himself.⁸⁶

Rupčić Kelam, and Kelam conclude that "the ethics of care builds on that experience that all persons share, though they have often been unaware of its embedded values and implications," and highlight "the importance of empathy and care as a crucial means for social change, alleviation of human suffering and anxiety, as well as the promotion of human well-being and happiness."⁸⁷

George P. Chrousos and I describe a philosophical approach of stress management based on the Epicurean concept of stability (eustatheia) and group psychotherapy.⁸⁸ We remark that, within the friendly social environment of their School,

⁸³ Ibid.

⁸⁴ Ibid., 162.

⁸⁵ Ibid., 166.

⁸⁶ Ibid.

⁸⁷ Ibid., 169-170.

⁸⁸ Christos Yapijakis, and George P. Chrousos, "Epicurean Stability (Eustatheia): A Philosophical Approach of Stress Management," *Conatus – Journal of Philosophy* 7, no. 2 (2022): 173-190.

the teaching methodology of the Epicureans included psychoeducational counseling through therapeutic criticism based on friendly freedom of speech and aiming at psychotherapy and at knowledge of maintaining mental health and well-being.⁸⁹

We tried to explain:

[...] the Epicureans called eustatheia (stability) the psychosomatic balance, which today we call homeostasis, and considered it the basis of true happiness; they recognized empirically the stress that disturbed psychosomatic homeostasis as an agitation of the psyche or a painful feeling of the body and used a number of mental and affective techniques (including the *tetrapharmakos*) to manage stress at its onset, so that it does not evolve into the particularly troublesome conditions of anxiety and/or depression, which may become chronic psychosomatic disorders.⁹⁰

We intended to emphasize,

the relation of the main ethical teachings of Epicurus with the biological basis of human brain functions and with the management of stress by cognitive and behavioral psychotherapy.⁹¹

We underline that according to Epicurus:

[...] prudence can maintain psychosomatic balance (eustatheia) by consciously choosing what brings happiness, namely by wise satisfaction of natural and necessary desires (which concern our instincts), by understanding the nature of our emotions as criteria of truth, and by wise selection of those pleasures that are useful and not harmful.⁹²

We explain: “Epicurus taught that through the scientific knowledge of nature and through prudence people can deal with irrational phobias about the unknown, with ideas and feelings of superstition, with the fear of not having

⁸⁹ Ibid., 174.

⁹⁰ Ibid.

⁹¹ Ibid., 173.

⁹² Ibid., 180.

their foolish desires fulfilled”⁹³ and above all the philosopher considered especially important the philosophical “treatment of the constant anxiety of death as a condition for psychosomatic eustatheia.”⁹⁴

We conclude that “Epicurus proposed specific philosophical ‘medicines’ for achieving psychosomatic eustatheia and eudaimonia, which are timeless, as long as the biological nature of humans remains the same.”⁹⁵

IV. Empirical pilot studies of philosophical management of stress

There are several methodologies used for management of stress and modifying stress-related response associated with suffering and chronic disease: lifestyle and healthy dietary choices, adequate sleep, regular exercise, cognitive behavioral psychotherapy, and biopsychological techniques such as relaxation, biofeedback, hypnosis, yoga, etc. (for a review).⁹⁶ Intervention programs of stress management that combine many techniques have been shown to enhance resilience and coping techniques and decrease stress for a period of time, based on systematic behavioral change.⁹⁷ One such multidimensional behavioral three-month program has also used the Pythagorean philosophical approach of introspection and memory practicing in order to assess self-mastery and self-awareness.⁹⁸ In this context, two successful novel empirical pilot studies of pure philosophical management of stress based on cognitive psychotherapy and modification of mentality have been presented, both of them realized in the COVID-19 pandemic period. A three-month positive psychology intervention combined with Epicurean and Stoic concepts was provided to adolescent students by Eleni Michopoulou; a month-long philosophical management of stress program based on Science and Epicurean Philosophy was offered to public sector professionals by Christos Yapijakis, Evangelos D. Protopapadakis and George P. Chrousos.

⁹³ Ibid., 184.

⁹⁴ Ibid.

⁹⁵ Ibid., 187.

⁹⁶ Anastasia Bougea, Nikolaos Spantideas, and George P. Chrousos, “Stress Management for Headaches in Children and Adolescents: A Review and Practical Recommendations for Health Promotion Programs and Well-Being,” *Journal of Child Health Care* 22, no. 1 (2018): 19-33.

⁹⁷ Maria-Despoina Kallianta, Xrysoula E. Katsira, Artemis K. Tsitsika, Dimitrios Vlachakis, George P. Chrousos, Christina Darviri, and Flora Bacopoulou, “Stress Management Intervention to Enhance Adolescent Resilience: A Randomized Controlled Trial,” *EMBnet Journal* 26 (2021): e967.

⁹⁸ Eleni S. Zigkiri, Nicolas C. Nicolaidis, Flora Bacopoulou, Dimitris Simos, Dimitrios Vlachakis, George P. Chrousos, and Christina Darviri, “The Effect of the Pythagorean Self-Awareness Intervention on Psychological, Lifestyle and Cognitive Measures of a Community Sample,” *Journal of Molecular Biochemistry* 9, no. 1 (2020): 32-40.

Eleni Michopoulou describes the program “Living happily in the era of COVID-19,” which is an intervention of Positive Psychology combined with Hellenistic Philosophy in secondary education.⁹⁹ The author discusses the pilot application of a program, which was:

[...] an innovative school intervention program was applied and its effect was investigated. The program involved a structured 11-weeks-long psycho-educational intervention on a sample of 11 Greek high school students (aged 16-17 years), combining principles of Epicurean and Stoic Philosophy with Positive Psychology techniques, aiming at promoting their mental well-being and the effective management of the psychological effects of the pandemic crisis.¹⁰⁰

Michopoulou mentions that “a qualitative methodology was used” and explains that:

Before the intervention, the students’ needs and expectations were investigated through written narratives and, after the intervention, semi-structured individual oral interviews and group interviews recorded their personal experiences and evaluative judgments.¹⁰¹

The author observes:

The application of positive techniques [...] had beneficial effects on the participating students, including emotional state improvement, mental well-being enhancement, and improved aspects of quality of life, such as subjective health, cognitive and school performance, family and interpersonal relationships.¹⁰²

The author quotes some of the students’ responses that reveal that the success of the intervention was due to its pragmatic basis. An illustrating example of a student’s comment is the following:

⁹⁹ Eleni Michopoulou, “‘Living Happily in the Era of COVID-19’: Philosophical and Positive Psychology Intervention in Secondary Education,” *Conatus – Journal of Philosophy* 7, no. 2 (2022): 193-227.

¹⁰⁰ *Ibid.*, 193.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

the Philosophy we were taught has a scientific basis and I liked that, Positive Psychology is also based on Science; we can be and feel well, if what we learn and we apply have to do with human nature, as Science investigates it. I agree with Epicurus, it is not possible to get rid of our fears, if we don't know our nature, it is not possible to be happy and enjoy our life without scientific knowledge. That's why it was useful the connection of Philosophy with Psychology.¹⁰³

Michopoulou emphasizes that:

The highlighting of the reinforcing role of Hellenistic Philosophy in the effectiveness of the applied techniques of Positive Psychology [...] is a novel finding in the existing literature [that resulted in] cognitive reconstruction based on the principles of Epicureanism and Stoicism that had beneficial effects on the mental well-being of adolescents in an era of crisis.¹⁰⁴

Evangelos Protopapadakis, George P. Chrousos and I discuss a pilot study of philosophical management of stress based on Science and Epicurean Philosophy.¹⁰⁵ We describe:

[...] an innovative program named Philosophical Distress Management Operation System (Philo.Di.M.O.S.) [...] designed to be implemented in a period of crisis, therefore it uses a fast-paced (one-month-long), easy to learn and practice philosophical approach to stress management that is based on cognitive psychotherapy and has the advantage that it can be offered to all people, regardless of age and educational level.¹⁰⁶

We mention that,

[...] the program of philosophical management of stress was based on Science, Humanism and Epicurean Pragmatism [and] it was offered to 100 employees of social structures in the Greek Prefecture of

¹⁰³ Ibid., 215.

¹⁰⁴ Ibid., 218, and 193 respectively.

¹⁰⁵ Christos Yapijakis, Evangelos D. Protopapadakis, and George P. Chrousos, "Philosophical Management of Stress based on Science and Epicurean Pragmatism: A Pilot Study," *Conatus – Journal of Philosophy* 7, no. 2 (2022): 229-242.

¹⁰⁶ Ibid., 229.

Attica [who corresponded to] a wide spectrum in respect to age, education level and specialty.¹⁰⁷

We report:

The pilot program was proved to be effective in achieving its objectives, based on the set evaluation criteria. Comparison of the trainees' responses of the anonymous questionnaires before and after the monthly training.¹⁰⁸

We observed:

[...] half of the trainees felt that they learned completely or very much to manage perceived stress, while a further 37.7% said that they gained a moderate ability to manage perceived stress [and] to advise others to manage their subjective perceived stress.¹⁰⁹

We quote some of the trainees' comments that indicate why the program was successful. A remarkable example is the following statement of a philologist with a Master's degree:

I have learned in this seminar to try to manage things in a cool way and not to create stressful scenarios in my head. I have been trained in humanities, but I had learned only superficially what the philosophers taught. Only now I have understood what Epicurus said about serenity, about happiness. A seminar that lasted so little time has covered six years of education and I finally comprehended all the essentials.¹¹⁰

We conclude:

The successful implementation of the pilot program of Philosophical Management of Stress verified the initial assumption that cognitive restructuring with philosophical psychotherapy is feasible even when taught to a heterogeneous group of people within a month. Basic requirements for such an educational program are to, first, provide

¹⁰⁷ Ibid.

¹⁰⁸ Ibid., 237.

¹⁰⁹ Ibid., 238.

¹¹⁰ Ibid., 239.

real scientific data, so that trainees can be convinced that there is a need to manage stress to prevent psychosomatic health problems, and second, to follow a clear pragmatic Epicurean approach in the management of perceived stress, which someone can learn to apply in every real-life situation.¹¹¹

It is worth mentioning that the application of the one-month-long Philo. Di.M.O.S. program was even more significantly successful¹¹² when offered to a small group of friends of Epicurean Philosophy at the ‘Garden of Athens,’ which is a circle of educated Athenians who meet once a week in order to freely discuss and experience the Epicurean way of thinking in friendship.¹¹³ Although more data need to be collected, the initial results suggest that the program seems to be more effective in persons with philosophical inclination.

V. Concluding remarks

It is obvious that the philosophical management of stress has a long history, but its full potential has not been yet appreciated. A self-evident big picture is emerging from the interconnected bits of personal and social dimensions of philosophical stress management discussed here, especially in the light of the important empirical evidence of the applied intervention approaches combining Philosophy with Science and Positive Psychology. The management of stress in everyday life and in periods of crisis seems to be more effective if it is based on philosophical approaches that are less egocentric/solipsistic and at the same time more pragmatic, empathic and connected to other people.

Accumulating evidence suggests that applied Philosophy which is compatible with scientific observations can be efficiently used in stress management. Our future as a species depends on the lessons learned from the COVID-19 pandemic that have touched the whole humanity, regarding the high priority of both physical and mental health, as well as the importance of meaningful human relations in pursuit of eudaimonia.

Acknowledgements

The author wishes to thank Evangelos D. Protopapadakis, Professor of Applied Ethics at the National Kapodistrian University of Athens for the invitation to serve as the Guest Editor of the special issue of *Conatus – Journal of Philosophy*

¹¹¹ Ibid., 239-240.

¹¹² Christos Yapijakis, et al., unpublished data.

¹¹³ Christos Yapijakis, ed., *Epicurean Philosophy: An Introduction from the “Garden of Athens”* (Athens: Stavrodromi Publications, 2022).

on Philosophical Management of Stress. Special thanks are due to the Managing Editor Despina Vertzagia and to the Layout Editor Achilleas Kleisouras.

References

- Anderson, Michael, Susan Leigh Anderson, Alkis Gounaris, and George Kosteletos. "Towards Moral Machines: A Discussion with Michael Anderson and Susan Leigh Anderson." *Conatus – Journal of Philosophy* 6, no. 1 (2021): 177-202.
- Andorno, Roberto, and George Boutlas. "Global Bioethics in the Post-Coronavirus Era: A Discussion with Roberto Andorno." *Conatus – Journal of Philosophy* 7, no. 1 (2022): 185-200.
- Arabatzis, George. "Pornography and Stress." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 143-156.
- Beckwith, Christopher I. *The Greek Buddha: Pyrrho's Encounter with Early Buddhism in Central Asia*. Princeton, NJ: Princeton University Press, 2015.
- Bougea, Anastasia, Nikolaos Spantideas, and George P. Chrousos. "Stress Management for Headaches in Children and Adolescents: A Review and Practical Recommendations for Health Promotion Programs and Well-Being." *Journal of Child Health Care* 22, no. 1 (2018): 19-33.
- Chrousos, George P. "Systems Biology and the Stress Response: From Pythagoras and the Epicureans to Modern Medicine." *European Journal of Clinical Investigation* 42 (2012): 1-3.
- Chrousos, George P. "Stress and Disorders of the Stress System." *Nature Reviews Endocrinology* 5, no. 7 (2009): 374-381.
- Classen, Albrecht. "Management of Stress Through Philosophical Reflections: Teachings by Boethius for Our Modern Life." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 63-78.
- Dimitriou, Dimitrios. "Corporate Ethics: Philosophical Concepts Guiding Business Practice." *Conatus – Journal of Philosophy* 7, no. 1 (2022): 33-60.
- Dimou, Nikos. *The Greek Buddha*. Athens: Nefeli Publications, 1984.
- Dimou, Nikos. "The Two 'Greek Buddhas.'" *Conatus – Journal of Philosophy* 7, no. 2 (2022): 79-86.
- Ejike, Cyril E. "COVID-19 and Other Prevalent Diseases in Africa: A Pragmatic Approach." *Conatus – Journal of Philosophy* 6, no. 1 (2021): 33-59.
- Goffi, Emmanuel Roberto. "Back to Eudaimonia as a Social Relation: What Does the Covid Crisis Teach Us about Individualism and its Limits?" *Conatus – Journal of Philosophy* 7, no. 2 (2022): 105-118.

Hale, Andrew J., Daniel N. Ricotta, Jason Freed, Christopher C. Smith, and Grace C. Huang. "Adapting Maslow's Hierarchy of Needs as a Framework for Resident Wellness." *Teaching and Learning in Medicine* 31, no. 1 (2018): 109-118.

Kallianta, Maria-Despoina, Xrysoula E. Katsira, Artemis K. Tsitsika, Dimitrios Vlachakis, George P. Chrousos, Christina Darviri, and Flora Bacopoulou. "Stress Management Intervention to Enhance Adolescent Resilience: A Randomized Controlled Trial." *EMBnet Journal* 26 (2021): e967.

Kormas, Panagiotis. "Stoic Cognitive Theories and Contemporary Neuropsychological Treatments." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 87-102.

Mensch, Pamela, and James Miller, eds. *Diogenes Laertius, Lives of the Eminent Philosophers*. Oxford: Oxford University Press, 2018.

Michopoulou, Eleni. "'Living Happily in the Era of COVID-19: Philosophical and Positive Psychology Intervention in Secondary Education.'" *Conatus – Journal of Philosophy* 7, no. 2 (2022): 193-227.

Nehamas, Alexander, Despina Vertzagia, Triseugeni Georgakopoulou, Jenny Pavlidou, Katerina Plevridi, and Fotis Stamos. "A Good Life: Friendship, Art, and Truth." *Conatus – Journal of Philosophy* 2, no. 2 (2017): 115-121.

O'Brien Wicker, Kathleen. *Porphyry the Philosopher to Marcella*. Atlanta: Scholars Press, 1987.

Oldfather, William A. *Epictetus. Enchiridion*. Cambridge, MA: Harvard University Press, 1928.

Pigliucci, Massimo, Skye C. Cleary, and Daniel Kaufman, eds. *How to Live a Good Life: A Guide to Choosing your Personal Philosophy*. New York: Vintage Books, 2020.

Rupčić Kelam, Darija, and Ivica Kelam. "Care and Empathy as a Crucial Quality for Social Change." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 157-172.

Singer, Nina, Monika Sommer, Katrin Döhnel, Sandra Zänkert, Stefan Wüst, Brigitte M. Kudielka. "Acute Psychosocial Stress and Everyday Decision-making in Young Healthy Men: The Impact of Cortisol." *Hormones and Behavior* 93 (2017): 72-81.

Todorović, Tanja, Luka Janeš, and Vanja Novaković. "Aesthetics, Psyche and Media: A Manifold of Mimesis in the Age of Simulation." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 119-141.

Valenzuela, Pia. "Fredrickson on Flourishing Through Positive Emotions and Aristotle's Eudaimonia." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 37-61.

West, Thomas G. *Plato's Apology of Socrates: An Interpretation, with a New Translation*. Ithaca, NY: Cornell University Press, 1979.

Yapijakis, Christos. "Ancestral Concepts of Human Genetics and Molecular Medicine in Epicurean Philosophy." In *History of Human Genetics*, edited by Heike I. Petermann, Peter S. Harper, and Susanne Doetz, 41-45. Cham: Springer International Publishing AG, 2017.

Yapijakis, Christos, ed. *Epicurean Philosophy. An Introduction from the "Garden of Athens."* Athens: Stavrodromi Publications, 2022.

Yapijakis, Christos, and George P. Chrousos. "Epicurean Stability (Eustatheia): A Philosophical Approach of Stress Management." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 173-190.

Yapijakis, Christos, Evangelos D. Protopapadakis, and George P. Chrousos. "Philosophical Management of Stress Based on Science and Epicurean Pragmatism: A Pilot Study." *Conatus – Journal of Philosophy* 7, no. 2 (2022): 229-242.

Zigkiri, Eleni S., Nicolas C. Nicolaides, Flora Bacopoulou, Dimitris Simos, Dimitrios Vlachakis, George P. Chrousos, and Christina Darviri. "The Effect of the Pythagorean Self-Awareness Intervention on Psychological, Lifestyle and Cognitive Measures of a Community Sample." *Journal of Molecular Biochemistry* 9, no. 1 (2020): 32-40.

