

Massimo Pigliucci (2012) *Answers for Aristotle. How Science and Philosophy Can Lead Us to a More Meaningful Life*. Basic Books, New York. ISBN: 978-0-465-02138-3, 312 pages, price: \$27.99

Reviewed by: Alfredo Marcos, Department of Philosophy, University of Valladolid, Valladolid, Spain, email: amarcos@fyl.uva.es

There was a time when humans ignored science, even philosophy. In fact, it has been this way for most of human history. Traditional practices, games and rites, stories and songs, myths and poems, folk wisdom, everyday experience and intuition, laws and customs, religious beliefs, mutual advice and example, as well as simple common sense oriented their lives. It should be acknowledged that many of them flourished, some people even lived long and happy lives, endowed with meaning and virtue. Others were unhappy, of course. They let themselves be guided by superstition or imprudence, or they just had bad luck. Or maybe they were victims of the stupidity and immorality of their congeners. It has been this way since there were humans on Earth, long before Socrates or Newton arrived on our planet. Therefore science and philosophy, together or separately, are not necessary conditions for human happiness, nor for the fulfilment of a virtuous and meaningful life. This is an empirical fact. One could say that today the world has changed precisely due to the progress of science and technology. So perhaps today a scientific literacy would be indispensable for leading a meaningful life. However, even today there are human beings who find science alien and yet are able to manage in some way by conferring meaning to their lives and finding moral guidance. On the other hand, science and philosophy are not, together or separately, a sufficient condition for people's happiness. We can refer again to our personal experience. We all know people well versed in one or the other, even in both, who live a quite miserable life. And yet, Massimo Pigliucci is perfectly right in linking science and philosophy (sci-phi, as Pigliucci abbreviates) with happiness, virtue and the meaning of life.

As the subtitle of Pigliucci's book says, science and philosophy "can lead us to a more meaningful life." This is especially true if we acquire philosophical insight mainly from Aristotle's work, as Pigliucci does. He argues reasonably that Aristotle is one of the best guides we can find for orienting our lives. He also seeks to further our understanding of life through the means of preeminent, current, empirical science. Pigliucci offers us a very enlightening sci-phi mix in a readily comprehensible manner.

In sum, sci-phi is neither a necessary nor a sufficient condition for a good life, but surely it can favour our chances for development and flourishing. It is therefore worthwhile to maximise communication of science and philosophy through essays, mass media and the education system. Pigliucci's book aims precisely at showing how science and philosophy together can help us to achieve a more meaningful life.

His strategy can be summarized as follows: firstly, he selects some crucial issues in our lives; then, he presents the more relevant scientific advances in order to get a better understanding of these issues; and, finally, he adds the relevant philosophical arguments for assessing the possible courses of action that we can take regarding these issues. Among the issues addressed we find the following: the moral question of right and wrong, the epistemic question of the scope of our knowledge, the question of personal identity, the question of interpersonal relations such as love and friendship, the political question of justice and, finally, the religious question. Surely it rings true that this list includes the most

fundamental issues for constructing a meaningful human life. Our practical decisions and ultimately our happiness critically depend on a good understanding of them.

So far so good, but how can science contribute to this understanding? Pigliucci cites here the latest developments, both theoretical and experimental, in evolutionary biology and genetics, neurophysiology, cognitive science, psychology and sociology. He accurately shows how these sciences guide us in tackling the aforementioned crucial issues.

Let's use some examples. The recent neurophysiological research teaches us which parts of our brain are involved in our moral reasoning, insofar as that it is currently developing a discipline called *neuroethics*. The scientist Antonio Damasio is carrying out particularly important research along this line. Evolutionary biology also shows us the possible evolutionary advantages of altruistic social behaviour, as it enhances the conservation and propagation of the related genes, as Richard Dawkins argues. Part I of Pigliucci's work deals precisely with these topics.

Meanwhile, the scientific research in psychology and neurophysiology reveals the biological basis, as well as the possibilities and the limitations, of our knowledge. There are, for example, psychological mechanisms that often compel us towards self-deception and fallacious reasoning. Research presented by Pigliucci (Part II) also teaches us that our knowledge sources are diverse -emotional, intuitive and rational ones- and not easily reconcilable with each other. In this sense, he says: "To achieve the most productive balance between intuition and analytical thinking is obviously crucial to making the best decisions we can in our everyday lives" (p. 98).

Neither is our willpower perfect. "There is a dark side -Pigliucci states- to this idea that we can overcome all sorts of difficulties if we just try hard enough" (p. 129). At this point the author rightly criticizes "this New Age metaphysical baloney" (p. 129). Instead, he provides very useful scientific information to capture the possibilities and limits of our free will and our sense of identity. Thanks to recent advances in psychology and neurophysiology we realize that our volition is quite conditioned by factors outside the rational conscious "ego." At the same time, these advances suggest some ways to strengthen the willpower (Part III).

As for friendship and love (Part IV), Pigliucci reveals their biochemical, evolutionary and cultural roots in a clear and entertaining way. For instance, it has been discovered that certain hormones have a crucial role in these areas. The author refers to such hormones as testosterone, dopamine, serotonin and vasopressin. He also imparts valuable information about the recent sociological research on friendship. His contemplations on current social networks, like Facebook, are of special interest.

From here on, Pigliucci presents the latest psycho-sociological research on our political involvement (Part V). He analyses, for instance, the psychological mechanisms we use to rationalize our decisions in the political arena. These decisions largely depend on our sense of fairness and justice, which, as Pigliucci shows, are firmly rooted in our biological nature and culture as well as in our evolutionary past. Again, scientific research in this area helps greatly to understand the political aspects of human life.

Finally, Part VI of the book is devoted to the discussion on God and religion. Once again the author looks for the current scientific results on the neurophysiological, psychological and sociological aspects of this subject matter. This latter part of the book is perhaps the most fragile and partial from the argumentation point of view. The treatment of religion could be more balanced if the author had taken into account, for example, the last Habermas (*Between Naturalism and Religion. Philosophical Essays*, Polity Press, Cambridge, UK, 2008). Instead, Pigliucci almost discards the notion that religion could make any

valuable contribution to ethics, or to the construction of a meaningful life. However, it is a fact that many people have enriched the sense of their lives, as well as their moral convictions, thanks to the support they receive from their religious beliefs. It's hard to deny the vital value that many people confer to the figure of Buddha or Jesus, to some sacred texts such as the Sermon on the Mount, the Parable of the Talents and the Parable of the Good Samaritan, not to mention the life lessons that many people obtain from contemporary religious figures as Mother Teresa or the Dalai Lama.

The author refers here to some theories and experiments originally designed to capture the origins and foundations of superstition. In this way, the author tries to capture the nature and human value of religion. However, this attempt naturally leads to a dead end, because superstition and religion are phenomena of quite different characters. Obviously religion can degenerate into superstition or fanaticism (in the same way as science can degenerate into a scientist ideology or philosophy into sophistry or mere verbiage). Superstition is not at all useful for conveying sense in our human life, nor for ensuring the flourishing of persons. Pigliucci fully agrees with this. But this does not indicate at all that religion, in its best sense, cannot make valuable contributions to human life.

In an analogous way, it seems to me somewhat inaccurate the equation that Pigliucci sets between religion and mysticism. There are forms of mysticism totally disconnected from religion. There are non-religious people who report mystical episodes of communication with nature. A philosopher like Wittgenstein -so well regarded by the analytic tradition- is read by many interpreters as a mystic. There are, in contrast, religious people who have never had any mystic episode, and whose religious faith rests rather on a rational or testimonial basis. Nevertheless, there is no reason to exclude mystical experiences as a source of guidance and sense for the lives of some people, even though such experiences will be of little help to others, given their incommunicability.

So far I have focused on the "sci" factor from Pigliucci's formula. But, as the author argues, scientific knowledge alone is not enough for building a happy life. He maintains that a philosophical reflection is also required. Hence, his proposal is precisely called sci-phi: "Throughout this book, I have argued that the relationship between science and philosophy in guiding our lives is complex, but surely one way to understand sci-phi is to let philosophy (informed by science) guide us in principle, and to use science (steered by philosophy) as our best bet for implementing those principles" (p. 220). In my opinion, this is one of the strengths of the book. The argument for the necessity of philosophy is extremely convincing. It relies primarily on the distinction between facts and values, as well as on a criticism of naturalistic fallacy. Science deals with matters of fact, but it is not definitive in the assessment of values, which is rather a philosophical job. Both, science and philosophy are in this sense complementary domains. When we try to draw moral conclusions directly from natural descriptions, we could commit the so called naturalistic fallacy. So, along with the description and scientific explanation of the facts, we need philosophical argument for assessing values. It would be of little use to know that dopamine acts primarily on romantic love if we are unable to evaluate the appropriateness of this kind of love for happiness and human flourishing.

Pigliucci makes several assertions along this line throughout the book: "It would seem that moral judgment is still an area where philosophy dominates, because it is hard to justify the equation of what is natural (as in the result of evolutionary process, or the brains' way of connecting analytical thinking and emotional reactions) with what is right" (p. 28). To determine our morals and construct the meaning of our life, scientific data are not enough; we need to add philosophical reflection. Aristotle, Hume and Rawls are the major

philosophical sources throughout the book. On the other hand, our author is rather critical about other thinkers, such as Plato, Kant, Mill and Sartre.

Regarding matters of moral thought, Pigliucci clearly presents three classical traditions: virtue ethics, deontology and consequentialism. According to the first, our moral decisions should be oriented towards happiness, and our actions must be guided by a virtuous character, a kind of second nature that can only be acquired by practice; abstract reasoning is not sufficient. The deontological tradition relies more on abstract reason, with transcendental duty being the right compass for our decisions, regardless of the consequences they produce. For its part, the consequentialist or utilitarian tradition evaluates our actions mainly depending on their consequences: they are good when they are useful for a greater number of subjects.

Although his position is sometimes eclectic ("we can put together a reasonable view of the ethical and meaningful life by combining elements of all three major moral theories" [p. 73]), Pigliucci basically favours the first of these traditions ("I am particularly sympathetic to virtue ethics " [p. 73]). And, again, he justifies this using reasonably good arguments. Let's quote two of them. Firstly, it is obvious that virtue ethics connects better than its rivals with a realistic view of human nature. We are by nature social animals with rational capacities. Every action we conduct seems to be guided by these traits. As animals, we search for physical wellbeing. As social beings we seek love and friendship, as well as a healthy familiar, social and political environment. As rational beings, we pursue knowledge, we love learning and contemplation, we wonder about ourselves and about the world in which we live, on nature and God. If we perform all these tasks to a level of excellence, according to the *arete* (virtue) as the Greeks used to say, and we continue doing so for a long time, then we will have a happy and meaningful life (*praxis teleia*). Deontology, however, avoids this idea of human life as teleological action, oriented towards purposes and especially oriented towards happiness. In place of *telos*, the deontologists put the idea of duty as the main guide for our actions. Meanwhile, consequentialism ignores the virtuous pursuit of individual happiness, and focuses on the potential utilitarian consequences for the greatest number of subjects. The second argument has to do with the idea of friendship (*philia*) as a relationship between concrete human individuals. Friendship is alien both to the moral landscape of consequentialism and deontology, because both of them regard morals exclusively in universal terms.

The inclusion of philosophy in the sci-phi cocktail saves Pigliucci from scientism and other surrounding exaggerations, such as genetic determinism and reductionism. In this sense, he says: "A better understanding of how science actually works put us in the position of the sophisticated skeptic, who is neither a person who rejects science as a matter of anti-intellectual attitude nor a person who accepts the pronouncements of scientists at face value, as if they were modern oracles whose opinions should never be questioned" (p. 123). It seems to me a very sound and balanced affirmation. But the attitude of critical vigilance must also be extended to philosophy, of course. Philosophers are not oracles either.

The problem is that Pigliucci leaves very little outside of the sci-phi mix. He does not contemplate any independent instance which could be able to exercise a reasonable criticism of sci-phi. Sensible instances such as common sense and the Aristotelian prudence (*phronesis*) could be very helpful for this task. However, once the author limits the human rationality to the pair sci-phi, he is forced to accept as ultimate criterion a sort of argument of authority: "But other things being equal, your best bet -particularly when the stakes are high- is to go with the expert consensus, and if a consensus is lacking, you're better off going with the opinion of the majority of experts" (p. 124). As the author himself acknowledges,

even this opinion could sometimes be wrong. We have learnt so accordingly from some historical case studies. But, as indicated by the author, there are no other reliable criteria outside of sci-phi for guiding our lives. Obviously, other sensible sources of knowledge (such as art, tradition, religion, common sense, wisdom, *phronesis*...), might also be incorrect at times, so what would be required, in my opinion, is a more complex system of mutual controls, a more pluralistic and integrative view of human knowledge and action.

We cannot trust the direction of our lives, indiscriminately, in the hands of experts, although in some cases it would be sensible to do so. For the positivists, human history is characterized by three stages or phases: mythical-religious, metaphysical-philosophical, rational-scientific. According to this positivist relate each stage represents progress at a given time, which was then overtaken by the next. According to this, human life should be governed, ultimately, by science. Let's remember the phrase that closes the manifesto of the Vienna Circle entitled *The Scientific Conception of the World* (R. Carnap, H. Hahn and O. Neurath, *Wissenschaftliche Weltauffassung: der Wiener Kreis*, Vienna: Artur Wolf Verlag, 1929): "The scientific world-conception serves life, and life receives it." Today we know that human life cannot be entirely trusted to science, because we realized that the scientific world-conception has to be complemented by other views. Science has its place in human life, a very important one, of course, but it shouldn't be hegemonic. The concurrence of philosophy is also required, as Pigliucci rightly states. In this sense, his position clearly overcomes positivist scientism. He has moved from "sci-only" to "sci-phi." But Pigliucci stops halfway. He fails to completely get rid of the positivist's stereotypes. Evidence of this is that after the rescue of philosophy, he stops, and does not integrate many other valid resources for human knowledge and life guidance. In particular, and in line with the Aristotelian tradition he often refers to, he could have considered the role of prudence and common sense as guiding elements of human life to happiness. For the second edition, surely imminent, of his fine book let me propose to Pigliucci the following formula: "sci-phi-phro".