

Review of Cliquet, R. and D. Avramov (2018), “Evolution Science and Ethics in the Third Millennium - Challenges and Choices for Humankind”

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These are fascinating times in the natural sciences. While developments in biological sciences such as molecular, behavioral and population genetics, epidemiological genomics, and proteomics enlighten our biological functioning as a human being at ever increasing speed, evolutionary sciences such as paleoanthropology, ancient genomics, evolutionary psychology and bioarcheology deliver a wealth of findings on our origin and evolution as a species. It is clear that the social and sociological impact of these developments will be substantial, as the possible applications arising from these fields go to the heart of our identity as individuals, members of populations and the human species. In guiding our societies in these disturbing times, we need well founded moral and ethical frameworks. Frameworks that are grounded in science instead of in ideology and that allow to make firm social choices.

In this impressive volume, Robert Cliquet and Dragana Avramov argue that it is the scientific knowledge about the long-term process of human evolution (or “hominisation” as they refer to it) that provides the unifying, rationally based approach to define and devise ethical directives for our future, both in terms of our phylogenetic evolution as with respect to our ontogenetic development. This book in fact revolves around this central issue: how can one of the strongest and most influential theoretical frameworks in the history of science (evolutionary theory) act as a moral compass if one considers the history of our evolution in the light of our unique cultural evolution? All this within the context of a continuously modernising, globalising, and ecologically sustainable world.

Avramov and Cliquet begin by explaining how evolutionary mechanisms contributed to the design of natural moral sentiments and the development of universal cultural values and norms. Two further introductory chapters concern an evolutionary analysis of religious and secular ideologies within the context of the modernisation process and a sustainable ecological environment. The point here is that traditional religions lost their authority and became maladaptive due to the development and application of modern scientific knowledge. Regarding the modern secular ideologies, the authors argue that all of the democratic ideologies include useful moral principles and practices but these are only partial building blocks for the design of a universal, evolutionarily grounded ethics in a further progressing modernisation. They excel by their fragmented nature and short-term perspective. In addition, the modern secular ideologies underachieve in strengthening moral principles and practices at the micro- or interpersonal levels.

The ethical vacuum created by the maladaptiveness of traditional religions and the shortcomings of modern secular ideologies is filled by evolution science, so Cliquet and Avramov argue. Only evolution science is able to provide a framework for elaborating global and inclusive ethics responding to existential and future challenges facing the human species. An evolutionary based ethical framework can guide humanity to higher and more secure levels of biological evolution and cultural development. The central guideline of

this scientifically based universal and inclusive morality framework is the perpetuation of the hominisation process, - an option which they defend against possible alternative future scenarios such as extinction, stagnation and regression. The continuation of the modernisation process and the achievement of a sustainable ecology are preliminary conditions to achieve this.

From their evolution-based central ethical goal, the authors derive several ambitions: optimal ontogenetic development, the promotion of quality of life, the promotion of equity, the shift from predominantly competitive towards cooperative social relations, and the promotion of universalism. From chapter 5 on, the book becomes ever more fascinating as the authors' arguments are developed in full from then on. I love the scenario-approach. Sometimes confronting to read, but comforting at the same time as the reader finds science based preferential outcomes. I also applaud the systematic way of building up the argument from chapters 6 to 8, steadily progressing the level of analysis from the individual to the intergenerational. The recurring structure in those chapters makes it easier to follow the authors arguments.

This book is therefore much more than an intellectual treatise on the application of evolutionary theory on the morals of our day. It is first and foremost a statement. Hence, the constant discussion of arguments pro and contra their narrative, particularly when positions are concerned that emanate from earlier religious convictions and current fractioned secular worldviews. Many parts of the book also go head-on against contemporary trends, fallacies and policies, for instance, the need to bring the world population size in balance with the higher needs for population quality and ecological sustainability, the need to strongly master in-group drives in favour of a more global/universal approach, the need to favour cooperative efforts at the cost of competitive drives at the inter-individual as well as at the inter-group levels, etc.

And in developing their moral framework, the authors expose widespread ethical fallacies and refute common prejudices and out-dated biases. Examples are: the impossibility to deduce values from facts, the need to foster multiculturalism, the alleged contraposition between meritocratic and egalitarian policies, the alleged irreconcilability between human enhancement and care for people with limitations, or between individual-focused and population- or societal-driven ethical goals, etc.

The closing message in the book is directed towards policy makers and opinion leaders, who are urged to reconsider their ethical, philosophical and theological convictions in a long-term evolutionary perspective. They are called upon to search common ground for action in order to resolve the world challenges our species is facing, and to direct humanity towards a future in which its enhanced capabilities allow to reach increasingly higher levels of hominization and humanisation.

One of the major contributions of this book is its exceptional capacity to transcend disciplinary boundaries between fields that are by nature quite differentiated and separated from one another. Each of the topics dealt with takes into account biological evolutionary processes in a longer-term perspective, socio-cultural changes, and ecological constraints. Books pushing interdisciplinarity to the limit as this one does are exceptional.

Writing an interdisciplinary work is also a challenge. It requires both in depth knowledge of the areas covered as well as a special talent, eye, and hand for synthesis and overview. Both requirements are elegantly met in this work, and so we have here an encyclopedic and thought-provoking work that fits in the intellectual tradition of the big science writers of this day, such as Stephen Pinker, Edward Wilson, Richard Dawkins, etc.

The subject of the book is at the crossroads of biology, biological and social anthropology, ethics, sociology of medicine, sociology and philosophy of science, bioethics, theology and even (bio-)politics and it will appeal to professionals in all these fields alike. I think at least every social scientist should read this. Lay people may find this work a hard nut to crack but will find themselves highly satisfied when they've done so. Policy makers will find inspiration on our desired future, from the evolutionary long term perspective. The societal relevance of this book can therefore not be

overestimated. Many of the modern day issues that are so inflammable politically (racism, religion, multiculturalism, ...) are explosive because there are so few well constructed frameworks to discuss them. This book, showing, simply said, where it all comes from and where it should go to, provides a rock solid background to look at these modern day problems. If everyone making statements about religion would read chapter three first, the intellectual debate would reach higher levels.

The views expressed in this book will surprise, enlighten, shock or please many readers and will find both strong supporters and ardent opponents. But the strictly scientific development of these arguments will appeal to everyone who enjoys a good intellectual debate, is concerned with the evolution of our society, and/or wishes to participate in the public debate. That is because this book is impressive in its sound treatment of a sensitive (some would say provocative) issue, intellectually rewarding because of the richness of the statements and insights, and providing an essential contribution to many fields of study.

References

Cliquet, R., & Avramov, D. (2018). *Evolution Science and Ethics in the Third Millennium*. Springer.

