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A good ancestor

In *The Good Ancestor*, Roman Krznaric presents a compelling argument about our responsibility to future generations. He highlights that in order to be good ancestors to the future generations we need to make a shift from short-term thinking, short-termism, to long-term thinking, long-termism. He notes that most of our decisions have been usurped by short-termism without any regard for their effect in the long term, a term whose horizon is centuries, millennia or even multiple generations in the future. There is also a six-pronged prescription of how we can overcome the grip of short-termism and begin to think long-term. These six aspects of the prescription are: deep-time humility, legacy mindset, intergenerational justice, cathedral thinking, holistic forecasting, and transcendent goal (242).

Universal responsibility

To whom is Krznaric's call directed? It is directed to every single one of us; from the janitor to the policy/law makers to entrepreneurs. It includes a call for a fundamental change in political policy making, social projects, and business undertakings. The responsibility cannot be relegated to a subset of the earth's population, it is universal. We all must assume our responsibility to ensure good living conditions for future generations. To do so is to be intergenerationally righteous towards those who come after, akin to those who came before us.

The blueprint of many of the conveniences that have become part of our daily lives were laid by our ancestors. And every invention or development we have undertaken had its basis on what was given to us by our ancestors. Without the work of Nikola Tesla in the 19th century, we would not have electricity in our households in the 21st. The world in which we live

and are told to expect is unimaginable without electricity. Consider this question: 'What do you have that you did not receive?' In our hand, therefore, is the key to the livelihood and survival of the future generations. What they will have is what we, the present generation, give them.

Unparalleled opportunity

There is another side to this coin. The universal *responsibility*, when considered from a standpoint of the time we live in, is also an *opportunity*. We have the opportunity to contribute to the survival of mankind in a way no other generation has been called upon to do. Our ancestors, in their time, were faced with various challenges, none of which posed a threat to humankind in totality. Today however there are many threats to humanity, from nuclear technology to artificial intelligence. Ecologically, we have not yet crossed the event horizon, much can still be done to prevent catastrophic events which may jeopardise future generations. The decisions we make, the endeavours we pursue must be entered into with a long-term view. We must carefully consider the long-term effect of our actions. An appropriate and timely response/action from us will etch our generation in the history books as a generation whose work was pivotal. We have an unparalleled opportunity to create a legacy. The livelihood of the future generations is not to be left to fate, but it depends on what kind of ancestor each one of us chooses to be.

Often the widespread view is that we need to reduce emissions that threaten the ecology of the earth, so many states/countries have plans to be carbon neutral by some set date. Undoubtedly this approach contributes to preserve the earth in a habitable condition for future generations, if the promises are fulfilled; yet it is rather passive. I think we need to take an active approach and ask: 'How can we make the earth for future generations?' Prevention of further damage is one thing but to seek that which will improve the lives of future generation is yet another. This kind active approach is to build a secure living environment for those who succeed us: after all they are our extension, our continuation. We need to actively invest in what creates favourable living conditions for our future selves.

Short-termism and long-termism

I've been involved with teaching and conducting research in physics. For the most part theoretical physics research inherently has long-term thinking built into it as do other disciplines of science research. Physicists are always interested in understanding the principles underlying natural phenomena; needless to say, this quest can neither be completed by one person nor by one generation.

Thus, the practice in theoretical physics is to, every 5–10 years, compile review articles whose purpose is to report current progress in a research area, to outline questions that still remain and to suggest possible research outlooks. To me these review articles are inestimably valuable because they are a helpful resource to the next-generation researcher. In fact, my research work was inspired in this fashion. For example, the work I did on quasi-Hopf algebras and their application in particle physics is contribution to research which began with Vladimir Drinfeld in the 1980s. This practice, although made popular in the 20th century, is not new but has been a part of research for many years. Pierre de Fermat, a mathematician from the 1600s, is a good example. He is famously known for making a mathematical claim without supplying a proof because there was not enough room on the page margin. The claim came to be known as *Fermat's last theorem* and its proof was completed in 1995. There are many such open research questions/invitations from past researchers who were *good ancestors* to us and invited us to join in the intergenerational quest. Today, we also practice being good ancestors to future generation researchers.

In this respect fundamental research has streamlined the process of passing the baton to future generations. This does not mean research possesses no short thinking; on the contrary it does. This comes in the form of pressure to produce publications, as it's usually said: '*publish or perish*'. This kind of [short-term] expectation is breeding ground for short sightedness concerning the long-term effects of our undertakings. In most cases, the effects of certain developments require a long period of time to surface, an essential process undermined by short-termism.

Another example where short-term thinking affects research is in research funding. The scarcity of funding for the basic sciences points to short-term thinking. Research projects that are associated with some industry will naturally have no lack here as they have the backing of the companies involved. Yet in such arrangements it is questionable if it is long-term thinking that takes precedence or motivation for short-term gain. Funding what is currently profitable seems to be the model and further reinforces the short-term view.

Finally, we turn to education. If we are to fulfill our global responsibility as a generation, we need to know about what it means and involves. I think education is the best channel through which we can administer this vision. An introduction into the education system of topics such as climate change, ecological change and their correlation with how we conduct life is potentially one of the best investments we can make for the sake of future generations. I believe leaders who are well-informed and are not insulated from the long-term effects of the policies they make will steer countries in the appropriate direction to being good

ancestors. With well-informed leaders and people, it makes it possible to attain to the transcendent goal of providing a planet that can support future generations, our continuation in time.

To be clear, it is not that short-term thinking should be done away with in favour of long-term but that short-term and long-term thinking must accompany each other. Urgent matters require short-term thinking and long-term thinking helps assess the effects of short-term thinking in the long run. Long-term thinking should instruct short-term decisions. The more long-term thinking is exercised, the better prepared we will be for decisions that require urgent and immediate action.

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