

Interview with Prof. Oded Galor, Brown University

Roots of Wealth & Inequality: a Conversation with the Author of *The Journey of Humanity*

By Japan SPOTLIGHT

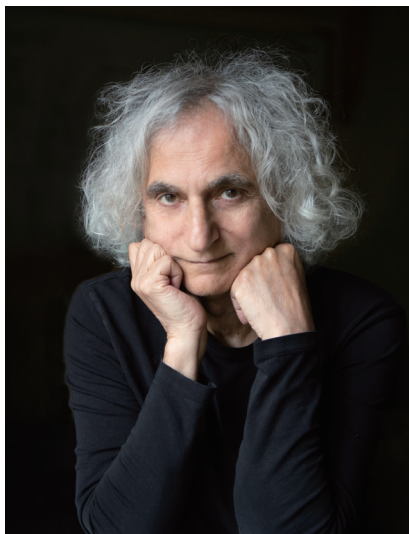
How has our present prosperity and inequality come about? What have been the driving forces behind the development process in the course of human history? How can we design policies that could foster prosperity and mitigate global inequality? Prof. Oded Galor of the Faculty of Economics at Brown University published a book titled *The Journey of Humanity: The Origins of Growth and Equality* in 2022, in which he introduces his “Unified Growth Theory” and explores the origins of wealth and inequality. Recently Japan SPOTLIGHT held the following interview with him.

(Online interview on March 14, 2023)

Unified Growth Theory

JS: It is fascinating to explore the central driving forces of human history. Thomas Malthus created the theory known as the “Malthusian trap” and Karl Marx discovered a mechanism in capitalism that leads to self-destruction. Your “Unified Growth Theory”, in contrast, assumes neither dystopia nor utopia as a destination of humankind. Would you say that whether human beings reach a dystopia or utopia would depend upon their aspirations, while economic development is largely driven by your theory?

Galor: Great thinkers such as Plato, Hegel, Malthus, and Marx argued that history unfolds according to inescapable universal laws, often disregarding the role of societies in shaping their own destinies. Unified Growth Theory, by contrast, neither posits an inevitable march of humanity towards utopia or dystopia, nor intends to derive moral insights about the desirability of the direction of this journey and its consequences. Instead, in order to understand the ultimate causes of the inequality in the wealth of nations, Unified Growth Theory is designed to faithfully present an interdisciplinary, scientifically based narrative of the evolution of societies since the emergence of Homo sapiens. The outlook derived from this exploration can be described as fundamentally hopeful about the trajectory of human societies, although this path is unlikely to lead



Prof. Oded Galor

us into a state of utopia. While inequality between nations is likely to subside, inequality within nations is likely to persist.

JS: Could you tell us about the merits of Unified Growth Theory and the demerits of the existing dichotomy in which the economy in the pre-industrial era and that of the post-industrial era are disjointed?

Galor: Unified Growth Theory was designed to uncover the wheels of change that have governed the journey of humanity in its entirety since the emergence of Homo sapiens in Africa 300,000 years ago. The development of this theory was predicated on

the realization that a significant portion of the inequality between nations was determined in the distant past, and therefore only a unified theory that links the present to the past can address the most fundamental mysteries of the growth process.

Unified Growth Theory suggests that over most of human existence the standard of living was very close to the subsistence level. For millennia, the wheels of change – the reinforcing interplay between technological progress and the size and composition of the human population – turned at an ever-increasing pace without an impact on living standards. But eventually, a tipping point was reached, unleashing the rapid technological progress of the Industrial Revolution and the transition to the modern growth regime.

However, when the take-off from stagnation to growth occurred in the past few centuries, it occurred earlier in some parts of the world,

triggering an immense inequality across countries. Institutional, cultural, geographical and societal characteristics that emerged in the distant past, as well as the forces of colonialism, contributed to the differential timing of this transition from stagnation to growth and to the emergence of a vast inequality in the wealth of nations. Hence, in order to understand the roots of inequality across nations today we must have a unified theory that captures the process of development in its entirety and links the current level of economic development to forces that operated in the distant past.

Different Stages of Economic Development

JS: Innovation in agriculture did not generate an escape from the “Malthusian trap”. It resulted only in a proportionate increase in the size of the population and eventually had no impact on living standards. Do you think these forces are still applicable to all the agricultural nations in the world today?

Galor: Ever since the emergence of Homo sapiens and the development of the first stone-cutting tool, technological progress fostered the growth and the adaptation of the human population to its changing environment. In turn, the growth and the adaptation of the population widened the pool of inventors and expanded the demand for innovations, further stimulating the creation and adoption of new technologies. Nevertheless, one central aspect of the human condition remained largely unaffected: living standards. Innovations stimulated economic prosperity for only a few generations, but ultimately, population growth brought living conditions back towards subsistence levels.

In the contemporary world, the few agricultural societies that have not experienced a massive increase in education and a rapid decline in fertility rates are still governed by these Malthusian forces and technological progress in these nations is likely to be converted predominantly into higher population growth. Nevertheless, most developing countries today are in the midst of their fertility decline and technological progress in these societies is likely to be converted into greater prosperity.

JS: What do you think were the advantages of agriculture compared with hunting and gathering in raising wealth?

Galor: According to some estimates, one acre of land can sustain 100 times more farmers than hunter gatherers. The transition from hunter and gatherer societies to sedentary agriculture communities during the Neolithic revolution, therefore, permitted a significant increase in the size of the human population. In particular, the human population increased 400-fold between the Neolithic Revolution and the Industrial Revolution. Nevertheless, the Malthusian forces that were present in this pre-industrial era did not permit an increase in human prosperity and the transition to agriculture created an explosion of the human population but did not result in greater human prosperity or greater inequality.

JS: How do you define the “Economic Ice Age”? Was income inequality much less significant in this age than in our age?

Galor: The “Economic Ice Age” was a long period marked by stagnation in the standard of living. During this epoch that lasted for over 99.9% of human existence, since the emergence of homo sapiens in Africa 300,000 years ago and till the eve of industrialization, technological progress was converted into more people rather than into more prosperous people. Income per capita was close to the subsistence level, and life expectancy fluctuated in a very narrow range of 25 to 40 years. Interestingly, income inequality over this time was of an order of magnitude smaller than it is today. The technological progress produced more people and not richer people, and so there was minor disparity in economic prosperity across the globe.

Population Growth & Innovation

JS: Population seems to be an immensely powerful key to drive economic growth. Is innovation enhanced by a bigger population and how does the population structure affect innovation?

Galor: The size of the human population, its adaptation to the technological environment, and its level of diversity has created a significant impact on technological progress in the course of human history. First, the scale of the population has widened the potential pool of inventors, expanded the demand for innovations, and has stimulated the creation, adoption and diffusion of new technologies. Second, the composition of the human population, and in particular

its level of human capital, has been critical in this innovation process since educated individuals have a comparative advantage at adapting and advancing new technologies. Lastly, diversity spurs cross-cultural pollination of ideas and has enhanced creativity, inspiring openness towards new ideas, and thus fostering innovations.

JS: The Industrial Revolution of the 18th century was a trigger for humankind to break through the Malthusian trap. As technological innovation goes on, investment in human capital has become a key to economic welfare. Could you explain how this resulted in a decline in population growth through a decline in the birth rate?

Galor: The reinforcing interplay between technological progress and the size and composition of the human population in the course of human history eventually reached a tipping point, unleashing the rapid technological progress of the Industrial Revolution. The increasing demand for skilled and educated workers who could navigate this rapidly changing technological environment induced parents to invest in the education of their children. However, since resources were very limited, parents had to bear fewer children in order to afford their education. Fertility rates started to decline and living standards improved without being swiftly counterbalanced by population growth. Thus began a long-term rise in human prosperity that the world has experienced in the past two centuries.

JS: Do you think that lower population growth would be good news for the global environment?

Galor: Indeed. I do think that the decline in population growth, along with human ingenuity, the transition to environmentally friendly technologies, and strict carbon emission regulations, will permit us to sustain the current pace of economic development while preserving the environment.

The journey of humanity over the past 300,000 years provides a hopeful perspective about the ability of humanity to flourish and overcome existential threats. As early as 12,000 years ago, when the human population increased beyond what the production capacity of hunters and gatherers could support, the threat of mass extinction propelled human ingenuity and brought about the domestication of plants and animals, the transition to agriculture, and the remarkable increase in agricultural yield, averting societal collapse. In the middle

of the 20th century, concerns about mass starvation and the inability of planet Earth to sustain its growing population brought about the Green Revolution and self-sufficiency in food production in many of the most populous societies across the globe. And most recently, humanity was quickly relieved from the devastating consequences of Covid-19 on our way of life, due to unprecedentedly rapid development of novel vaccines based on mRNA technologies.

The record of human ingenuity in the past few centuries suggests that our species' incredible power of innovation may yet again rescue our planet from the catastrophic implications of climate change. We cannot anticipate the nature of these technologies, as was also the case in the past. However, provided that measures will be taken to mitigate the current trend of climate change – such as inducing further decline in fertility, increasing the use of environmentally-friendly technologies, and enforcing strict carbon emission limits – humanity will have the necessary time to develop these revolutionary technologies which will turn climate change into a fading memory in the centuries to come.

Institutions Affecting Inequality Among Nations

JS: Among the factors affecting income inequality across nations: what do you think is most important? Would factors like democratic political systems, competition policy, and equal opportunity for education be key? Do you think democratic nations are more successful in their economies than authoritarian nations?

Galor: The interaction between several forces has contributed to the prosperity of nations – growth enhancing political institutions, cultural traits and economic paradigms, geographical heritage conducive for the emergence of inclusive institutions and growth enhancing cultural characteristics, and a level of population diversity that permitted an adaptation to a rapidly changing technological environment.

Democratic regimes tend to be more successful than authoritarian ones for several reasons. First, they are designed to foster meritocracy and equality of opportunities, enhancing economic efficiency and social harmony. Second, they are not threatened by growth enhancing cultural and institutional transformations. Lastly, they do not deprive individuals of civil liberties that are essential for

creativity, innovation and an entrepreneurial spirit.

Impact of Digital Economy on Inequality

JS: What do you think about the possible impact of the digital economy today on inequality among nations? Many Africans today have access to mobile and IT technologies. So will income inequality decrease from now on?

Galor: The digital technology will permit the diffusion of growth enhancing cultural traits and could empower individuals to fulfill their individual potential. Incontestably, cultures and institutions conducive to economic prosperity can be gradually adopted and formed and this process could be expedited in the digital era. In addition, geographical isolation can be mitigated by the importation of modern transportation technologies. But the effects of these forces are unlikely to reduce inequality and may instead provoke frustration, turmoil and prolong stagnation, if the persistent impact of other deep rooted factors is not properly addressed.

JS: What do you think about the implications of remote education? Through remote education children can have easy access to the best education. That could be helpful in reducing inequality.

Galor: It is quite apparent that in order to mitigate the inevitable impact of rapid technological change and globalization on inequality, societies ought to ensure equality of opportunity, so that *a priori* every person is as likely to benefit from the growth progress. In this respect, remote education and access to the best possible scholars and educational methods is a very promising trend that could reduce inequality of opportunities. This is an important unintended consequence of Covid-19.

JS: Finally, looking at the future of humankind, do you see it in a positive light thanks to new technologies and human capital reducing inequality? Does this fit within the framework of your Unified Growth Theory?

Galor: The journey of humanity over the past 300,000 years provides a hopeful perspective about the ability of humanity to flourish and overcome existential threats. Indeed, it is not inconceivable that

humanity is on the verge of an additional phase transition, in which the wheels of change – the reinforcing interaction between the characteristics of the human population and the technological environment – will transform humans' cognitive abilities and trigger waves of transformative technologies that will dramatically affect human prosperity.

As the wheels of change that have governed the journey of humanity continue to turn, measures that enhance a future-oriented mindset, education and innovation, along with gender equality, pluralism and respect for differences, hold the key to universal prosperity. They would foster innovations, reduce social non-cohesiveness, and contribute further to the fertility decline and to the mitigation of the current trend of climate change.

Applicability of Unified Growth Theory

JS: Can your Unified Growth Theory be applied to any country?

Galor: Indeed, Unified Growth Theory is a universal theory that applies to any country or region of the world. The “Wheels of Change” – the reinforcing interaction between technological progress and the size and composition of the human population – have been the universal forces that have governed the process of development in any region of the world. Nevertheless, the speed of the rotation of the Wheels of Change has differed significantly across societies because of differences in cultural, institutional, and geographical characteristics, colonial history, as well as population diversity, leading to the differential timing of the take-off from stagnation to growth across the globe.

The Journey of Humanity

https://www.amazon.co.jp/-/en/Oded-Galor/dp/0593185994/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=1681478633&sr=8-1

JS

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