

**SUPERABUNDANCE:
INNOVATION, GROWTH AND FUTURE
BY MARIAN TUPY Y GALE POOLEY**

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The book analyzed is entitled “Superabundance”, by authors Marian Tupy and Gale Pooley, and was published in 2022, but the work analyzed corresponds to the translation made in 2023 for Ediciones Deusto. It is divided into three parts: part one, “The lethal idea of Thanos: from antiquity to the present and beyond”; part two, “Measuring abundance: new methodology, empirical evidence and in-depth analysis”; part three, “Human flourishing and its enemies”.

My first piece of evidence is the initial highlight, which introduces the book, attributed to a statement by Fernand Braudel in his work “Civilization and Capitalism, 15th to 18th Centuries”, in which he states that the great difference between 1800 and before is the great growth in population resulting from material growth, which is both a cause and a consequence of it.

Considering the central theme of the book, we can safely say that this statement is the first historical evidence supporting the hypothesis defended by the authors that there are resources that exceed the basic consumption needs of the world population, contrary to the idea, also historically formulated, that resources were scarce and could lead to a population collapse, so it is a more optimistic and, in a way, challenging vision that the book proposes to the reader.

The first part begins with an allusion to a science fiction film in which Thanos is one of the main characters and also the villain of the film, however, the premise that Thanos advocates the destruction of a part of human life, turns out to be the same one that was once used historically and supports the theory that resources can be depleted due to the pressure we put on them.

Thanos mission is not destruction for destruction's sake. He wants to preserve the future viability of life. If he sets out to destroy half of life, it is to save the rest and ensure its continuity in time. (Tupy & Pooley, 2023, p. 34)

The book then delves into the pessimistic view that characterizes current and past thinkers on this issue, offering different religious perspectives as well as historical views from different periods of antiquity, reinforcing that, in these periods, there was initially no concern about resource depletion. Yet evolution has shown that this lack of awareness may have instigated a worse-than-expected present.

In ancient Greece, the poet Hesiod (750-650 b.c.) described human history as a series of degenerative stages (...) a Golden Age in which people “lived like gods” (...) the ages of man would have progressively declined: from gold to silver, from silver to bronze and from bronze to iron (...) Hesiod believed he was living in this last stage, which he characterized as an age of misery and violence (...) “men never rest from toil nor escape pain and death” (...). (Tupy & Pooley, 2023, p. 38)

The first part also includes important aspects, such as a set of economic and social indicators showing that conditions are improving in both the developed and developing world, from the evolution of

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average per capita income in developed countries to the increase in daily calorie intake in developing countries.

However, as in the past, the authors warn that society continues to have a negative and pessimistic view of future developments, despite seeing a present that offers improvements in living conditions.

Another relevant aspect of this part of the book is Thomas Malthus' theory of population evolution, in which Malthus argues that population eventually grows more significantly than resources can sustain, so it is necessary to control population growth by, for example, birth control with anti-natalist policies, giving as examples China and India, the results of which he describes as tragic.

The authors disagree with Malthus on this issue and justify their position by drawing on ideas that they develop more significantly in later parts of the book, such as the human capacity to create, adapt, and use resources efficiently, creating a path to economic and social progress. Therefore, overabundance is not only about the physical availability of natural resources, but also about the human capacity to innovate and create value from them. In this logic, population growth is not a threat to sustainability but a source of creative potential and economic development.

The larger the population, the more likely it is that creative minds will emerge to help invent a solution to the most pressing problems (i.e., raising supply to meet growing demand). Moreover, humans are the only animals capable of cumulatively building and developing better solutions from inventions conceived in the past. Therefore, as the population grows, information accumulates and innovation accelerates. (Tupy & Pooley, 2023, p. 96)

The second part begins with a methodological approach that seeks to underpin the importance, stressed by the authors, of analyzing the evolution of resources in terms of abundance rather than scarcity. This is achieved by using indicators relating to the price of goods and services that allow their historical evolution to be analyzed, as well as providing a better spatial contextualization. Approaching a subject with a view to its reflection in a developed country is drastically different from the approach required for a developing country.

In our definition, we are in a situation of abundance when the nominal hourly income increases faster than the nominal price of the resource we want to acquire (...) The quantification of abundance, like that of human progress in general, involves a task of study that is essentially always retrospective. It compares today with yesterday. If people today experience greater abundance than they did yesterday, then humanity is better off. (Tupy & Pooley, 2023, p. 151)

Also in this section, the authors devote a chapter primarily focused on analyzing the evolution of resources and their per capita prices, making various distinctions for goods and services with respect to a set of countries under analysis. They then analyze the relationship between these resources and the way in which wages have evolved. Using a lot of visual information through tables and graphs, it is easy to see that the abundance of resources per capita has grown enormously, as products have become cheaper and therefore less scarce for the population.

If there are more people [in the short term] there may be more problems, but at the same time there will be more people to solve these problems, which will leave us with the advantage of having in the long term less cost and less scarcity (...). The ultimate resource, the supreme resource, is people (...) who will exercise their will and imagination for their own benefit, and inevitably that will be to the benefit of all of us. (Tupy & Pooley, 2023, p. 303)

The third part focuses on human beings and how technological innovation and freedom, particularly economic freedom, have created this overabundance of goods and services, which translates into a better quality of life in general. Regarding innovation and technological development, the idea that human beings are different from other animals because of their capacity for innovation, which allows them to improve their quality of life and, ultimately, to adapt in order to survive, is addressed. In this sense, it is important

to highlight the role of the agricultural revolution, the precursor of the industrial revolution, in which merits are recognized that made it possible to increase the world's population, as well as, subsequently, to free manpower from rural areas to urban areas, where they would serve the interests of an expanding industry.

Finally, it is also imperative to emphasize the issue of freedom and equality, conferring rights so that someone can derive their own benefit from an invention, but that it can serve the collective interest.

In fact, during their lives, most people do not invent or innovate anything. (...) human evolution is defined by social, rather than technical, innovation. Figuring out how to throw a stone is a technical problem, but using stones to protect against predators requires a social solution (i.e. a coordinated bombardment). (Tupy & Pooley, 2023, p. 431)

In conclusion, however, this part ends with those who have historically functioned as enemies of progress, emphasizing, naturally, the time when such progress and certain ideas could be detrimental to individual and political interests.

German Romanticism aligned itself with nationalism (...) To that end, it identified two destructive forces of nature. The first was technology, which gave mankind the ability to dominate nature. The second was capitalism, which destroys any connection between nature and the product of manpower (or economic production). (Tupy & Pooley, 2023, p. 483-484)

To conclude, the authors choose to end with the question, "Can overabundance continue?" and the brief introductory paragraph they take from Julian Simon's work makes the answer to that question very clear: "The problem in the world is not that there are too many people, but the lack of political and economic freedom that many of them suffer" (Tupy & Pooley, 2023, p. 515).

As a brief comment on the book, and in response to the question posed by the authors, imagine the potential that would be unleashed if everyone in the world could fully innovate. The merit of the interdisciplinary approach adopted is remarkable, as history permeates the entire book and is used to inform many of the authors' arguments. Geography appears frequently in comparisons that elucidate the different realities of the world, highlighted visually in the quantitative presentation of economic indicators for various countries in the second part of the book. Economics is a constant theme, which reaches its climax in the more technical second part, where the value of quantitative and mathematical knowledge is emphasized. This section provides an in-depth analysis of the evolution of resources, using economic indicators to support the thesis of overabundance.

It is important to note that while the book is accessible to the public for most of its content, the second part, with its extensive use of tables and graphs, may be rather technical for readers unfamiliar with this type of data representation. Also surprising is the absence of comparative maps between countries, which could provide a visual and accessible understanding of global disparities in the distribution of resources and wealth.

So Tupy and Pooley align themselves with other thinkers such as Steven Pinker in "Enlightenment Now" and Matt Ridley in "The Rational Optimist," who also argue that human progress has improved living conditions globally over time. Pinker, for example, argues that scientific progress has led to improvements in health, wealth, and security, while Ridley emphasizes the importance of exchange and innovation in economic development. (Gates, 2018; Monbiot, 2010; Palmer, 2018)

However, it is crucial to address the criticisms raised by economists from other currents, such as Keynesians and Marxists, who point to the inequalities inherent in the current economic system. While Tupy and Pooley argue that abundance can be achieved by all, they emphasize that the unequal distribution of wealth and resources remains an obstacle. Thus, Amartya Sen, in "Development as Freedom," for example, argues that economic and political freedom is essential for human development, but also stresses the importance of addressing inequalities and providing opportunities for all. (Osberg, 2000)

In turn, geography not only contextualizes the different economic and social realities at the global level, but also allows for a more detailed analysis of how resources and innovation are distributed and

evolve in different regions. The authors' geographical comparison between developed and developing countries highlights the disparities that exist. (Gates, 2010; Pinker, 2018)

In conclusion, the book offers an optimistic and challenging perspective on humanity's ability to generate resources beyond our basic needs, contrasting historical theories of scarcity and collapse.

Using an interdisciplinary approach spanning history, economics, and geography, the authors present a robust, if at times technical, analysis of the evolution of resource abundance. Their central argument, which emphasizes the human capacity to innovate and create value, suggests that population growth and economic freedom are essential for sustainable progress.

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