

A Comparison Between Thomas Malthus's and Amartya Sen's Views on Famine: Natural Constraints or Political Pathologies?

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Abstract: This paper compares the similarities and differences between Thomas Malthus and Amartya Sen's opinions on famine. By studying them, the hope is to discover the fundamental mechanisms of historical famines and find practical solutions to cope with this kind of "social malaise". The comparison between Thomas Malthus's and Amartya Sen's views on famine highlights their contrasting explanations and implications. Malthus, rooted in 18th-century England, argued that famine is a natural check on overpopulation, stemming from the imbalance between population growth and agricultural production. In contrast, Sen, influenced by his upbringing in British India, criticized the Food Availability Decline (FAD) theory and instead proposed the entitlement approach, which highlights political and economic inequalities as root causes of famine. Malthus viewed famine as an inevitable part of natural cycles, while Sen demonstrated that famines often occur despite adequate food production, due to failures in distribution systems and access. The FAD approach is critiqued for focusing solely on food supply while overlooking accessibility and distributional disparities, with Sen's framework is praised as a significant advancement in addressing famine. However, critiques of Sen's theory point to its potential undervaluation of agricultural production in subsistence economies. Their legacies are enduring—Malthus's ideas influencing sustainability and resource debates, and Sen's theories shaping global policies like the Human Development Index (HDI). Ultimately, Malthus's "pessimistic optimism" contrasts with Sen's proactive and human-centered solutions to famine and poverty, underscoring their relevance to contemporary challenges.

Keywords: famine, Food Availability Decline (FAD), exchange entitlement

Introduction

Scholars continued to employ a conventional method of analysis as the Bengal Famine unfolded in the 1940s: The calamity was precipitated by a sudden, sharp decrease in the food supply, which was referred to as the Food Availability Decline (FAD). This perspective was consistent with Thomas Malthus's theory in *An Essay on the Principle of Population*, in which he posited that the failure of birth control was the actual cause of disasters like famines and plagues: "[...] that the population, when left unchecked, increases in a geometrical progression of such a nature as to double every twenty-five years... However, the output of agriculture would be merely an arithmetic progression" (Malthus, 1798, p. 4). Consequently, natural population growth would lead to a diminished value of food availability or decreased access to exchange entitlements (Sen, 1977). In the 1970s,

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numerous scholars contended that there was evidence of escalating malnutrition on a global scale (Aykroyd, 1974; Aziz, 1975; Brown & Eckholm, 1974), which increased Amartya Sen's awareness of the deterioration in the famine scenario. He began to investigate the history of the Bengal Famine, which he considered to be the most extensive famine in the past hundred years, in light of the fact that "the biggest famine in history has just begun" (Dumont, 1975, p. 29). He developed his perspective on the political economy of malnutrition during the course of the research.

Upon meticulous analysis of data, Sen discovered that the global trend rate of population growth has not surpassed that of food production; in fact, it has been markedly lower. Furthermore, no significant region of the world has experienced such an excess, with the potential exception of Africa (Sen, 1977). Consequently, Sen resolved to explore an alternate framework for comprehending famine—the exchange entitlement theory. He claimed that FAD theory functioned well within a self-sufficient agricultural system, wherein food availability directly influenced a family's overall welfare. In the examples he investigated, famine primarily occurred when the exchange economy was prevalent. In an exchange economy, a family's potential for starvation mostly hinges on its sellable assets, its ability to transact, and the prevailing values of those assets. This led to a definitive conclusion: It was excessively simplistic to perceive famines solely as consequences of insufficient food availability. Famine arises from inequalities in the distribution system.

This paper commences with succinct biographical details on Malthus and Sen, while concurrently drawing analogies between the eras in which they resided. It subsequently concentrates on Sen's 1977 work, *Starvation and Exchange Entitlements: A General Approach*, along with its application to the Bengal Famine, and Malthus's *An Essay on the Principle of Population*. It examines the principal ideas of the two prominent economists, their distinctions, and the underlying causes for these differences, aiming to leverage their legacies to identify viable solutions for contemporary famine issues.

Biographical Sketch of Malthus and Sen

Thomas Robert Malthus (1766-1834) was born at The Rookery, a modest yet refined residence in Westcott. His father, Daniel Malthus, was the son of Sydenham Malthus, a Chancery clerk and director of the South Sea Company. His mother was the offspring of Daniel Graham, apothecary to Kings George II and George III. His affluent familial background afforded him a superior education, establishing a robust foundation for his subsequent studies at Jesus College, Cambridge, in 1784. Upon graduation, he assumed the role of curate at Oakwood Chapel.

When Malthus released the inaugural version of *An Essay on the Principle of Population*, he intended to counter his father's positive perspective of the perfectibility of humanity and society. This essay garnered him fame, although it also incited debate and skepticism. Certain onlookers regarded Malthus as "a reckless young man" and deemed him "excessively zealous and overly radical in articulating his theory". Nonetheless, it did not impede him from formulating his population theory during his lifetime. The essay underwent six editions, during which Malthus articulated several prominent concepts, including positive and preventive checks on population, the moral restraint of impoverished individuals, and the notion of market glut. Notwithstanding extensive discourse, Malthus's hypothesis offered a framework for forecasting population dynamics.

Amartya Sen (1933-) was born into a Santiniketan family in Bengal, British India. His father, Ashutosh Sen, served as a Professor of Chemistry at Dhaka University, while his mother, Amita Sen, was the offspring of Kshiti Mohan Sen, a distinguished Sanskritist and scholar of ancient and mediaeval India. Amartya Sen was

educated in a family with a strong academic foundation. He commenced his schooling at St. Gregory's School in Dhaka in 1940 and subsequently completed it at Patha Bhavana. In 1951, he enrolled in Presidency College in Calcutta and subsequently advanced to Trinity College, Cambridge, where he obtained his Ph.D. in economics.

During the 1960s and 1970s, Sen advanced the theory of social choice, building upon Kenneth Arrow's Impossibility Theorem. It established a basis for his subsequent publication, *Poverty and Famines: An Essay on Entitlement and Deprivation*, in which he commenced an in-depth exploration of the fundamental causes of famine. In 1977, after gathering sufficient data on food production during significant historical famines, he demonstrated that famine was not attributable to a decrease in food availability (e.g., Bengal in 1943, Ethiopia in 1973, and Bangladesh in 1974) (Sarracino, 2010). In 1981, he presented his "entitlement theory" which contributed to the formulation of the Human Development Index (HDI).

Causes of Famine: Malthus vs. Sen

Famine seems to be the last, the most dreadful resource of nature. The power of population is so superior to the power in the earth to produce subsistence for man, that premature death must in some shape or other visit the human race. (Malthus, 1798, p. 44)

Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat. (Sen, 1983, p. 756)

Malthus perceived famine as a consequence of Food Availability Decline (FAD). The imbalance between population growth and food production results in a diminished per capita food availability. Consequently, hunger results from the inadequacy of the "positive check" on population, disrupting the balance between population and food resources.

Amartya expressed discontent with this theory. He instead interrogated the correlation between food availability decline and food accessibility (Sen, 1977). The former pertains to the inadequacy of the average allocation ratio per individual, serving as an objective data indicator, whereas the latter concerns the inadequacy of exchange entitlements. Exchange entitlement comprises wage rate, manufacturing capacity, transaction costs, and social security benefits. When access to entitlements is negatively impacted by external factors (e.g., unemployment, locust infestations), the lower socioeconomic class is more likely to be affected initially due to their inherent vulnerability, as they possess fewer material resources compared to individuals in higher social strata. The sole method for them to get materials is by utilizing dollars to exchange for those products in markets. In times of crisis, currency becomes impractical, resulting in the deprivation of these citizens' transaction rights. From this viewpoint, only tangible goods or materials that may replace currency function as circulating capitals, granting individuals exchange entitlements within a specific market of rights. The potential fall of food availability per capita will not alter the fundamental truth that the primary determinant of famine is the availability of trading mechanisms.

Sen discovered that, in many regions globally, the growth in food supply has been comparable to or even outpaced the increase in population. Nonetheless, it did not systematically eradicate starvation. He perceived individuals and agricultural products as two distinct categories interconnected by a special matching process.

Malthus's misapprehension can, to a degree, be attributed to the influence of the Physiocratic School that thrived during his time. In promoting laissez-faire, physiocrats prioritized production over transaction as the inherent source of wealth (Brue & Grant, 2013). This may constrain Malthus's conceptual framework, as his assertion that only one sector of the economic system may produce a surplus implies a one-to-one correlation of

wealth exchange, neglecting the horizontal exchanges among diverse market groupings. Furthermore, Malthus neglected the disparity in exchange entitlement among those groups.

In conclusion, Malthus emphasized natural limitations, but Sen contended that famine is an economic issue stemming from distributional injustice rather than mere resource scarcity.

Solution to Famine: Legacies of Malthus and Sen

FAD Approach

The measures incorporated in the FAD approach were established in accordance with Malthus's population theory. However, because Malthus was primarily concerned with showing the validity of reducing demand (specifically, the role of famines in decreasing population), this technique lowered the "anti-social" tone of Malthus' initial beliefs and provided a slightly more optimistic answer. The FAD method posits that scarcity arises from natural catastrophes (such as floods, droughts, and storms) or anthropogenic disasters (including geopolitical conflicts, flawed economic policies, and insufficient infrastructure). To mitigate these adverse effects on the food supply, enhancing food productivity (e.g., expanding arable land, intensifying the utilization of existing farmed areas) would be viable.

This method has persisted as a compelling rationale for an extended period, notwithstanding its absence of empirical validation (Tezanos-Vázquez, 2024). Upon retroactive examination of famines in Bengal (1943), Ethiopia (1972-1974), Sahel (1968-1973), and Bangladesh (1974), Sen discovered that calamities did not adversely affect the average output yield per capita. The primary factor contributing to the four significant famines he examined was not a diminished amount of food availability. The Bengal Famine resulted from a significant rise in food prices due to wartime inflation; the Ethiopian Famine and Sahelian Famine stemmed from inadequate governmental response to conflict and drought; the Bangladesh Famine was precipitated by governmental mismanagement of food imports during a period of flooding. In other words, while it is logical to recognize that availability may contribute to food shortages, the escalation into a severe famine should be ascribed to political failures rather than natural limitations.

Entitlement Approach

The entitlement approach focuses on individuals' capacity to acquire food resources through legally accessible mechanisms inside society. Sen's entitlement theory claims that in an economy characterized by private ownership and trade, individuals possess two elements of entitlement: initial endowment, typically comprising fixed assets, and entitlement mapping, which encompasses various methods for transforming commodities derived from the initial endowment (Tauger, 2003). He identified the fundamental issue in famines as the restriction of exchange rights, specifically, the obstruction of individuals' access to agricultural resources due to governmental failures, which ultimately resulted in distribution disparity.

Sen's theory of entitlement fundamentally challenges the dominant Food Availability Decline (FAD) model of famine, which views famine as a direct consequence of scarcity in food production or availability. The FAD model posits that natural disasters, crop failures, or demographic pressures cause the supply of food to decline and, as such, directly trigger famines. However, Sen argues that this view is "lame" for being reductionist and incapable of capturing the notion of distribution and access to food within the economic system. For as he suggests, "famines can and do occur even with food supplied to the market" which remains inaccessible to target at-risk groups because of economic constraints.

In his analysis of the 1943 Bengal Famine, Sen shows that the availability of food did not significantly change, but due to wartime inflation and market speculation, the prices of food suddenly and radically increased. Such increase in prices affected landless laborers and rural workers doubly because their wages did not similarly increase and therefore reduced their ability to buy food. Sen's entitlement framework highlights that famine often results from income inequalities and lack of economic access to food, rather than an absolute scarcity. The distinction is very important because it shifts emphasis away from simply increasing food production to ensuring equitable access to resources. His analysis, therefore, emphasizes the requirements of social safety nets, good wage policies, and effective mechanisms of distribution in order to not let famine occur within economies that produce large income and wealth inequalities. He emphatically urged more focus on economic accessibility, social safety nets (such as job programs, food subsidies, and rationing), income redistribution, early warning systems, and adaptive government.

His concept of entitlement earned him the 1998 Nobel Prize in Economic Sciences; nonetheless, critiques have emerged regarding his *Essay on Entitlement*, particularly from those who contend that Amartya Sen was merely formulating a belief system, described as "a more or less universal belief" (Bowbrick, 2022). Nevertheless, all the critiques appeared to overlook the foundational premises of Sen's theory, which he articulated at the outset of his study, *Starvation and Exchange Entitlements: A General Approach and Its Application to the Great Bengal Famine*. "[...] This study focuses on the role of exchange entitlement shifts in precipitating destitution and not on the causal process that led to those shifts" (Sen, 1997, p. 383). In other words, they conflated the essence of entitlement theory: It is a solution-oriented framework aimed at addressing starvation, rather than merely a rationale or premise. Sen was attempting to contest the entitlement method in relation to the FAD approach, rather than between their hypotheses. He also attempted to elucidate the issue of famine and subsequently identified a remedy. Likewise, Bowbrick's criticism of academics who misused "entitlement" is untenable, as their dismissal of other theories pertains solely to the "solution" aspect, rather than a repudiation of the theoretical development process.

Other Applications of Malthus and Sen's Ideas

While some scholars may regard Malthus's theory as excessively radical, its concepts on sustainability, ecological and economic thought, and contemporary social policies remain enduring. Sen's theory is extensively utilized by international agencies, including the FAO and United Nations Development Program, with the most prominent application being the United Nations Human Development Index (HDI), which evaluates well-being through health, education, and income, in addition to economic progress. Malthus's ideas significantly influenced the foundational thought processes guiding governmental decisions about population, resource management, and environmental policies. Likewise, Amartya Sen's perspectives provided novel opportunities for policymakers to enhance famine avoidance, poverty reduction, and other matters pertaining to human rights.

Regarding Malthus's population theory, experts emphasize its implications for environmental and social effects, although various viewpoints exist. His views previously appeared anti-social, reframing class problems as demographic issues (Bookchin, 2010), attributing blame to the general populace for procreating excessively or prolonging their lives. Malthus's perspectives on the Poor Law are perceived as legitimizing privilege while dehumanizing its victims; conversely, they shielded the bourgeoisie from reproach. Concerns have also been raised over how academics have misinterpreted and misused the concept of sustainability in contemporary

discourse by drawing on Malthus's pessimistic views of population increase and the depletion of natural resources (Holt, 2006).

In sharp contrast, Amartya Sen's entitlement theory faced fewer political controversies than Malthus's and functioned more as a statistical, preventive, and anticipatory instrument. In 1986, while serving as a research advisor at WIDER (World Institute for Development Economics Research), he pioneered India's Public Distribution System (PDS) and Ethiopia's Productive Safety Net Program (PSNP) to guarantee food accessibility during economic crises. By 1990, the PSNP model has consistently demonstrated success in various regions of Africa and Latin America, enabling these nations to effectively assist the able-bodied rural poor in times of need (Ravallion, 1992; K. A. Abay, M. H. Abay, Berhane, & Chamberlin, 2022). In Brazil's Fome Zero (Zero Hunger) Program, Sen's entitlement theory was widely used as the basis to launch different programs and policies, among which Bolsa Familia (Family Grant Program) enhanced low-income families' exchange entitlement through cash transfers, created production entitlement for smaller farmers by guarantying the number of seed suppliers in local markets for those farming families, and provided social entitlements to children in public schools through school meal programs.

In comparison with Malthus's predictions, Amartya Sen had a greater impact on marginalized or impoverished regions to avert humanitarian catastrophes and enhance emergency response, particularly for at-risk populations. Malthus's theories were primarily viewed as a political instrument employed by those in power, irrespective of the economic status of the countries involved. Their methods of inspiration were notably diverse as well. Malthus's writings serve as both a reflection and a metaphor, urgently cautioning the government about prevailing suffering, whereas Sen focuses more on what is happening in the world. Malthus anticipated the future, whereas Sen both looked back at history and reflected on the present.

Final Remarks

The vices of mankind are active and able ministers of depopulation. (Malthus, 1798, p. 44)

No famine has ever taken place in the history of the world in a functioning democracy. (Sen, 1999, p. 178)

Thomas Malthus is characterized as a "pessimistic optimist", and Amartya Sen is described as an "optimistic activist". Despite Malthus's persistent critique of human nature, asserting that "The advocate for the perfectibility of man, and of society. Consequently, natural population, have indulged themselves in the contemplation of possible future states of society, the pictures of which have been drawn in the glowing colors of fancy", he was, in reality, deeply concerned about the future of humanity (Malthus, 1798, p. 27). His ostensibly anti-social proposal regarding "the check of the population" could not obscure his aspiration to safeguard humanity's future, despite his Darwinian mindset. Furthermore, his extremism may be perceived as a consequence of the constraints of his era, when academia staunchly endorsed laissez-faire and Darwinism.

Amartya Sen was known for his crisis management and determination to promote the well-being of underprivileged citizens. What distinguishes him from other economists is his departure from the conventional dependence on empirical analysis, which is prevalent among many economists. He took into account all non-normative aspects while tackling issues, incorporating significant humanistic principles into rational analysis. The question that most people have is if his theories being right for political correctness and so-called universal values have anything to do with his receiving the Nobel Prize in Economics and Sciences. However, it may be preferable for people to focus on the positive conclusion and practical value, regardless of the procedure or

exterior colors associated with it. After all, from an economic standpoint, we are logical beings that focus more on the result of any situation we come across.

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