ADAM SMITH ON THE PROCESS OF CIVILIZATION AND THE ROLE OF COUNTERFACTUAL REASONING

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ABSTRACT

This paper examines Adam Smith's use of counterfactual reasoning in his analysis of the "process of civilization" and its implications for modern economics. Smith, influenced by Isaac Newton, Robert Simson, Francis Hutcheson, and David Hume, employed counterfactual reasoning to critique the Mercantile System by comparing actual economic developments with the "natural course of events." His physiocratic bias limited his engagement with emerging industrial advancements, yet his methodological contributions remain significant. Smith's focus on "what if?" questions in policy discussions continues to shape modern economic thought, despite some limitations in fully realizing his theoretical framework.

Keywords: Adam Smith, David Hume, counterfactual reasoning, imaginary constructs, Scottish Enlightenment, Newtonian methodology.
JEL Classification: B12, B31, N01.

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ADAM SMITH SOBRE EL PROCESO DE CIVILIZACIÓN Y EL PAPEL DEL RAZONAMIENTO CONTRAFACTUAL

RESUMEN

Este artículo examina el uso que hace Adam Smith del razonamiento contrafactual en su análisis del "proceso de civilización" y sus implicaciones para la economía moderna. Smith, influenciado por Isaac Newton, Robert Simson, Francis Hutcheson y David Hume, utilizó el razonamiento contrafactual para criticar el Sistema Mercantil comparando los desarrollos económicos reales con el "curso natural de los hechos." Su sesgo fisiocrático limitó su escrutinio de los emergentes progresos industriales; sin embargo, sus contribuciones metodológicas continúan siendo significativas. El enfoque condicional de Smith sobre cuestiones como "¿qué sucedería si?" en las discusiones de política continúa modelando el pensamiento económico moderno, a pesar de algunas limitaciones para identificar su marco teórico.

Palabras clave: Adam Smith, David Hume, razonamiento contrafactual, construcciones imaginarias, Ilustración escocesa, metodología newtoniana.

Clasificación JEL: B12, B31, N01.

1. INTRODUCTION

Counterfactual reasoning, as old as humanity itself, has been essential for survival, as early humans needed to ask questions such as: What should we do if a beast approaches our settlement, or a fire threatens to destroy it? Ancient Greek philosophers explored counterfactual thinking through thought experiments and mental representations of alternative realities (Byrne, 2005). Gottfried Leibniz proposed the existence of infinite alternate worlds, while Isaac Newton imagined an infinite universe populated by infinite worlds through imaginative constructs (Cohen, 1980). Newton's (1999 [1687]) famous declaration, "hypotheses non fingo" (I frame no hypotheses), emphasized that science must rest on empirically sound foundations rather than philosophical speculation.

Modern counterfactual thinking has roots in the Scottish Enlightenment, with figures such as Adam Smith arguing for the best approximation

of truth rather than defining it outright. Philosophers such as David Hume (1739, 2000 [1748]) and John Stuart Mill (1872) highlighted the role of counterfactual reasoning in understanding causal relationships. Counterfactual analysis enables us to identify causal effects between a policy intervention and its outcome. More recently, Simon (1969) introduced the concept of the artificial, and Lewis (1973a) further developed it in his advanced theory of counterfactual conditionals based on "possible worlds." Lane (1993) extended these ideas to economics, using "artificial worlds" to model and analyze hypothetical scenarios.

This paper discusses the role of counterfactual reasoning in Adam Smith's analysis of the "process of civilization." Smith evaluated this process against the "natural course of events," an idealized path of development with certain desired properties. Deviations from this path, caused by various disturbances, led to missed opportunities for economic growth and improved living conditions. Although Smith wrote *The Wealth of Nations* (WN) for an educated audience, he primarily addressed "legislators and statesmen" who shaped society's future. He focused on minimizing these deviations or correcting them to realign actual development with the "natural" course. His criticism concentrated on merchants and manufacturers who he held primarily responsible for mismanagement and a suboptimal development trajectory of the mercantile system (Smith, WN IV.viii.54).

Smith's argument often employs counterfactual reasoning. Given that any real economy reflects mercantile influences, what would it look like, *if* these practices were absent? How would the economy change *if* we replaced certain mercantile institutions —such as laws, rules, and organizations— that contradicted the natural course ideal with ones that supported it?

In this paper, we explore Smith's views on the process of civilization and his use of counterfactual reasoning. Section 2 outlines key intellectual influences on Smith, including Isaac Newton, Robert Simson, Francis Hutcheson, and David Hume, and examines how these thinkers addressed the problems of cause and effect and counterfactual reasoning. In Section 3, we discuss Smith's view of the "process of civilization," comparing the "natural course" with the actual course, which he believed misguided policies had distorted. Smith contends that merchants and manufacturers, by promoting mercantilist ideas, aimed to limit competition and

support a system of privileges and monopolies. While Smith's critique of mercantilism is often compelling, it suffers from his "physiocratic prejudice" and a fundamental misunderstanding of industry's role as an "engine of growth." We address what remains of Smith's social theory and his use of counterfactuals in Section 3 and the concluding Section 4.

2. NEWTON AND THE SCOTTISH ENLIGHTENMENT

Adam Smith studied mathematics with Robert Simson and moral philosophy with Francis Hutcheson at the University of Glasgow. These scholars profoundly influenced Smith, awakening his appreciation for Newton's rigorous analytical methods and his derivation of broad causal principles from specific observable data. Smith meticulously studied Newton's magnum opus, the *Principia* (1687), which highlighted the fecundity of these methods and inspired Smith to explore their application to the process of civilization (see especially *The Wealth of Nations*, Books III and IV). Smith's fatherly friend, David Hume, further developed ideas entertained by Newton and Hutcheson (Mossner, 1980). Hutcheson's emphasis on empirical observation, as well as his views on human nature and moral sense, resonated with Hume's own empiricism and philosophical investigations into human understanding and morality. Hume significantly influenced Smith's thinking on causality and counterfactual reasoning.

This section provides a summary of these influences, focusing specifically on Newton, Simson, Hutcheson and Hume. For more detail, see Knell (2024, forthcoming).

2.1. Newton

Cohen (1980, 1990) convincingly explained that Newton's scientific method marked a significant shift in the practice of the natural sciences. Its two foundational components were, first, the derivation of mathematically formulated implications from hypothetical systems or *imaginative constructs*[1], and second, the application of these constructs to explain

[1] Newton used the terms "hypothetical" and "theoretical" to describe his models and constructs in the *Principia*. Kant explored the role of imagination in forming concepts and theoretical models. Modern discussions about the philosophy of science, particularly by

phenomenological reality. These imaginative constructs, far from being mere speculations, serve as carefully crafted models that provide the foundation for rigorous mathematical exploration. Through these models, Newton formulated laws that, while initially abstract, evolved into powerful tools for understanding the natural world.

When applying these imaginative constructs to phenomenological reality, Newton (1999 [1687]) bridged the gap between theory and observation, allowing him to evaluate and validate the abstract models derived from imaginative constructs against empirical evidence. This process strengthened the explanatory power of his theories and established a new standard for scientific inquiry, where hypotheses had to be grounded in mathematical reasoning and subjected to experimental verification.

One of Newton's key tools was counterfactual reasoning. George E. Smith (2002) explores how Newton used "if-then" propositions as a methodological tool to link motions to forces and derive laws connecting macro-level physical phenomena. Newton's approach, which involved considering hypothetical scenarios and examining different conditions, allowed him to refine his theories and assess their robustness. He used counterfactual reasoning to anticipate potential challenges and alternative explanations. By advancing beyond the Aristotelian and Cartesian models, Newton expanded the boundaries of natural philosophy and significantly contributed to the evolution of scientific thought.

Newton's scientific method not only revolutionized natural philosophy but also laid the groundwork for the advancements in moral philosophy and political economy. As Newton (1952 [1704]) wrote in *Opticks* (Query 31), "If natural philosophy in all its parts, by pursuing this Method, shall at length be perfected, the Bounds of Moral Philosophy will be also enlarged." Enlightenment thinkers, including Adam Smith, adapted Newton's principles to their own fields of enquiry. Thus, we may speak of an adoption-cum-adaptation of Newton's method.

The influence of Newton extended beyond the content of his scientific discoveries to shape his style as well (Cohen, 1980, 1990). His rigorous, clear, and mathematically precise approach shaped modern scientific

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Karl Popper and Thomas Kuhn, explicitly use the term "imaginative construct." We discuss this concept in a manner similar to Cohen's treatment in *The Newtonian Revolution* (1980).

communication by simplifying complex phenomena into accessible equations. By using counterfactual reasoning, he clarified the relationship between theoretical models and real-world phenomena, reinforcing the broader implications of his work. His method and style laid the foundation for modern scientific inquiry, emphasizing empirical verification, mathematical reasoning, and creative exploration.

2.2. Newton, Simson, Hutcheson, Smith and the formation of Enlightenment thought

As a student at the University of Glasgow, Adam Smith studied mathematics under Robert Simson and moral philosophy under Frances Hutcheson. Smith praised Simson in *The Theory of Moral Sentiments* (TMS III.2.20) as one of the greatest mathematicians he has ever known and then commends Isaac Newton for the *Principia*. He also praised Hutcheson for being "the most acute, the most distinct, the most philosophical, and what is of the greatest consequence of all, the soberest and most judicious" (TMS VII.ii.3.3). Hume, a close friend and mentor, further shaped Smith's intellectual development, especially about empiricism and causality (Ross, 2010). Skinner (1974) argued that Hume was the most important influence on Smith.

Simson (1723, 1762 [1756], 1777) revived ancient Greek geometry, emphasizing the counter-factual nature of porisms and their causal and geometric principles. He adhered to the synthetic approaches of ancient geometers, arguing that these methods offered a more rigorous foundation for understanding mathematical causality (Trail, 1812). Simson's restoration of Euclid's *Elements* avoided modern notation and focused on the geometric structures central to these works (Tweddle, 2010; Ackerberg-Hastings, 2023)[2]. This approach, reflecting Newton's preference for geometric reasoning over the algebraic methods of Leibniz

[2] Simson (1962 [1756]) built on his 1723 work with *Euclid's Porisms*, offering a modern interpretation according to Tweddle (2010). During Smith's studies, debates centered on Newtonian versus Leibnizian notations, analytical versus synthetic methods, and limit procedures versus differential equations. Simson retained Euclid's porisms without symbols, whereas others began incorporating symbols. By the late nineteenth century, English geometers had adopted moderate symbolism (Michel and Smadja, 2022).

and Descartes[3], reinforced Newtonian principles and laid a solid foundation for Smith's later intellectual work. By integrating both analysis and synthesis, Simson aimed to restore the methodological rigor of the ancients, using Euclid's interpretation of porisms as a counterfactual exploration of potential solutions under specific geometric conditions.

Hutcheson combined empirical observation with hypothetical scenarios in his moral philosophy. In *A System of Moral Philosophy* (1755), Hutcheson examined causality and human behavior through counterfactual scenarios to explore how different circumstances might affect moral judgments and social justice. Although Hutcheson did not explicitly frame his arguments in counterfactual terms, his method implicitly considered alternative outcomes. This approach contributed to Smith's own use of counterfactual reasoning in both moral and economic contexts. Hutcheson's integration of Newtonian methods into his philosophical inquiry bridged the gap between scientific reasoning and moral theory, influencing Smith's approach to economics and ethics.

As a young scholar, Smith lectured and wrote extensively about Newton's methodology, deeply incorporating elements of Newtonian philosophy into *The Theory of Moral Sentiments* and *The Wealth of Nations*[4]. Skinner (1974) confirmed Newton's influence on Smith's early work, noting that Smith employed Newtonian methods of causal reasoning and counterfactual analysis to explore moral and economic phenomena. In his *Lectures on Rhetoric and Belles Lettres* (LRBL, ii.132-134), Smith contrasted Newton's coherent method of connecting phenomena with Aristotle's approach of creating new principles for each phenomenon. He praises Newton's ingenuity in both natural and moral philosophy, highlighting its universality. In Newton's third edition of the *Principia*

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[3] After publishing the first edition of *Principia*, Newton focused on reviving ancient geometry, especially Euclid's work. He highlighted that the geometric interpretation of calculus gave meaning and context, asserting, "The ancient geometers investigated things sought through analysis, demonstrated them through synthesis, and published them when demonstrated so that they might be received into geometry" (Guicciardini, 1999, p. 102).

[4] Cohen (1994), Montes (2003, 2008), and Schliesser (2005) all highlight Smith's deep understanding of Newton's philosophy and the Newtonian style. While Cohen (1994, p. 65) argues that Smith accurately but incompletely integrated Newton's physics, Blaug (1992, p. 52) contends that Smith deliberately applied the Newtonian method in *The Theory of Moral Sentiments* and *The Wealth of Nations*.

(1726), the fourth rule asserts that propositions derived from phenomena should remain valid until new evidence suggests otherwise, embodying a counterfactual approach that refines theories through exceptions.

Written before 1750, Smith describes philosophy in *Essays on Philosophical Subjects* (EPS) as "the science of the connecting principles of nature," noting that it transforms "a seeming chaos of dissimilar and disjointed appearances" into "order and coherence" by uncovering the "invisible chains" that link phenomena (EPS, Astronomy II.12)[5]. This metaphor reflects Newton's influence and shows Smith's commitment to uncovering causal relationships in both the natural and moral worlds. He explores the role of imagination in scientific inquiry, comparing thought systems to machines that connect causes and effects, much like the imaginative constructs Newton employed in the *Principia*[6]. These imaginary systems reveal the underlying causal structures of the universe, echoing Newton's view of science as a continuous evolution. Smith emphasizes the pursuit of causal explanations that challenge established truths, with wonder as the "first principle that motivates man to study Philosophy" (EPS Astronomy III.3)[7]. Shaped by Newtonian principles, Smith's philosophy of science reflects a dynamic interplay between observation, imagination, and the pursuit of causal mechanisms.

2.3. David Hume

David Hume significantly influenced moral philosophy with his empirical approach, which highlighted the importance of human sentiment and experience in ethical reasoning. He challenged traditional views on causality by arguing that causation is not directly observable, but a men-

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[5] Schumpeter (1954, p. 182) called the *Essay on Astronomy* "the pearl of the collection."

[6] Blaug (1992, p. 53) notes that Smith's treatment of scientific theories as "imaginary machines" went largely unnoticed by economists and had minimal influence on nineteenth-century philosophy.

[7] A similar passage appears in *The Wealth of Nations* (WN V.i.f.25): "The maxims of common life were arranged […] by a few common principles, in the same manner as the phenomena of nature […] This science […] is called moral philosophy." In *The Theory of Moral Sentiments*, Smith writes, "The general maxims of morality are formed […] from experience and induction" (TMS VII.iii.2.5).

tal habit formed from observed regularities. Hume used counterfactual reasoning, considering hypothetical scenarios to explore the principles underlying human behavior and morality.

In *A Treatise of Human Nature* (1739), Hume argued, much like Newton, that developing the science of humanity requires using the "experimental" method (Skinner, 1974). He asserted that "as the science of man is the only solid foundation for the other sciences, so the only solid foundation we can give to this science itself must [be] laid on experience and observation" (1739, p. 43). Hume also challenged rationalist conceptions of causality, viewing the cause-effect relationship as a product of memory and experience (Pearl and Mackenzie, 2018). In the *Treatise*, particularly in Book I, Part III, Section XIV, he explored the nature of cause and effect, emphasizing that our understanding of causality arises from experience and the constant conjunction of events. Other sections in Book I address the origin of ideas, the association of ideas, and the principles of causation.

Hume (2000 [1748]) revisited themes related to causation in *An Enquiry Concerning Human Understanding*. In Section IV, he expresses skepticism about causal inferences, while Section VII emphasizes the necessary connection between causes and effects. Section VIII further explores the relationship between free will and determinism. Although earlier philosophers, including those from ancient Greece, used counterfactual thinking in hypothetical scenarios, Hume was the first to explicitly define causation in terms of counterfactuals. He states,

> We may define a cause to *be an object followed by another, and where all the objects, similar to the first, are followed by objects similar to the second*. Or, in other words, *where, if the first object had not been, the second never had existed* (2000 [1748], p. 146; italics in text).

Hume's definitions of "cause" highlight two aspects: One emphasizes constant conjunction, and the other focuses on the conveyance or transfer of thought (Beauchamp, 2000, p. 37). His analysis implicitly involves counterfactuals, as he considers what it means for one event to cause another and reflects on events that could have occurred but did not. This work laid the foundation for modern philosophy on causation and counterfactual reasoning, a foundation later expanded by philoso-

phers such as David Lewis (1973a, 1973b), who formalized the role of counterfactuals in causal analysis.

In 1742, Hume published *Essays, Moral, Political, and Literary* (Essays), which include contributions to economics as well as on causality and counterfactuals. In his essay "Of the Rise and Progress of the Arts and Sciences," Hume (1985 [1777]) emphasizes the importance of clearly distinguishing between what is due to chance and what arises from causes in inquiries into human affairs. He notes that it is of the utmost importance "to distinguish exactly what is owing to *chance*, and what proceeds from *causes*", and that there is no subject, "in which an author is more liable to deceive himself by false subtilties and refinements" (Essays, p. 111). Hume adds:

> To say, that any event is derived from chance, cuts short all farther enquiry concerning it, and leaves the writer in the same state of ignorance with the rest of mankind. But when the event is supposed to proceed from certain and stable causes, he may then display his ingenuity, in assigning these causes […] and discovering his profound knowledge, in observing what escapes the vulgar and ignorant (Essays, p. 111).

According to Hume, distinguishing between chance and causes relies on an individual's sagacity, but he proposes a general rule "to help us in applying this distinction". He writes:

> *What depends upon a few persons is, in a great measure, to be ascribed to chance, or secret and unknown causes: What arises from a great number, may often be accounted for by determinate and known causes.* (Essays, p. 112; Hume's emphasis).

Hence, his rule relies on a Law of Large Numbers, although the reliance is "often," but not always justified[8].

Hume repeatedly emphasizes the importance of accurately distinguishing between cause and effect in his writings. In his essay "Of Interest," Hume explores a hypothetical scenario where commerce extends

[8] The economic theorist and statistician Ladislaus von Bortkiewicz was later to put forward a Law of Small Numbers, using data on deaths from horse kicks in the Prussian army.

worldwide, prompting the world population to adjust its behavior accordingly. In this context, political economy that studies such a regime is of particular importance, since it is "of consequence to know the principle whence any phenomenon arises, and to distinguish between a cause and a concomitant effect." Hume further explains that understanding these principles

> may frequently be of use in the conduct of public affairs. At least, it must be owned, that *nothing can be of more use than to improve, by practice, the method of reasoning on these subjects, which of all others are the most important; though they are commonly treated in the loosest and most careless manner*. (Essays, p. 304; emphasis added).

Hume assigns political economy a crucial role in guiding economy and society through all the difficulties they face, a view echoed in Smith's concept of the "science of the legislator" (TMS VI.ii.2.17-18).

2.4. "Reconciling reason to experience"

In recent times, "evidence-based" economic policy has dominated public discourse. The call for policies grounded in reliable empirical facts seems almost self-evident and has been long advocated, with David Hume among its early proponents. Hume recognized, however, that meeting this demand is challenging. Schumpeter (1954) emphasized this difficulty by pointing out that the vast and ever-expanding sea of facts is silent until economic analysis makes it talk, that is, interprets it. He referred to this necessity as "vision" and argued that some such vision or elementary economic analysis is crucial from the start of research to find relevant data and evidence. Researchers may not always make the best choices, and as understanding evolves, both theory and evidence will change. Consequently, distinguishing between causes and effects is a complex task.

Hume illustrates this problem in his essay "On Money," where he calls attention to the common confusion between causes and effects. Hume illustrates how a "scarcity of money", leads to various negative effects impacting different groups of people. However, the real "principle of reason" behind it —the small quantity of commodities available, "irrespective of the greater or lesser abundance of precious metals"— remains

unidentified (Essays, pp. 289-290)[9]. Hume insisted that the problem is not the scarcity of money, which can be subdivided or debased to circulate nearly any amount of commodities. The effect, he argued, "really arises from the manners and customs of the people; and that *we mistake, as is too usual, a collateral effect for a cause*." Hume notes, "The contradiction is only apparent; but it requires some thought and reflections to discover the principles by which we can reconcile *reason to experience*" (Essays, p. 290; the second emphasis is Hume's). He warns that basing economic policy on seemingly unobtrusive facts may lead one completely astray by mistaking a collateral effect for a cause. The challenge economics faces, is to "reconcile reason to experience." It is not sufficient to consider isolated pieces of evidence from the vast and expanding sea of facts; the key is to judiciously select the evidence that reveals the underlying causal structure; see on Hume's reasoning Kurz (2011)[10].

As we previously noted, we cannot solve this problem definitively; it may require continuous adjustments or even fundamental changes. Adam Smith shared this perspective, comparing the development of economic theory to building a machine. In his *Essay on Astronomy*, he emphasized the need for a combination of imagination, realism, and constructive skill. Much like Newton's use of imagined systems and mathematical constructs in the *Principia*, Smith often employed the concept of imaginary machines and constructs.

> Systems in many respects resemble machines. A machine is a little system, created to perform, as well as to connect together, in reality, those different movements and effects which the artist has occasion for. A system is an imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed. (EPS Astronomy: IV.19).

This process is ongoing. While we may strive to improve our understanding of the economy and society through better tools and ma-

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[9] Smith in *The Wealth of Nations* also uses the example.

[10] The German philosopher Friedrich Nietzsche took a radical stance on this issue. In a well-known aphorism, he argued that "we never have facts, but only interpretations." Post-modernists widely embraced this view.

chines, internal changes within the observed system —its endogenous self-transformations— can diminish that understanding. We cannot guarantee that research will continuously bring us closer to a comprehensive understanding of socioeconomic issues, nor that we will ever have nearly all the information we need[11].

It is important to note that Smith held this skeptical view of the possibilities and limits of science and research, even though disruptive innovations and radical technological and organizational progress —later emphasized by Marx and Schumpeter as significant challenges— were not a part of his story. He rather referred to cumulative "improvements." However, his use of the combinatorial metaphor to describe the creation of new knowledge by reconfiguring and recombining existing ideas (see WN I.i.9) suggests that technological progress, as a recombinant, path-dependent process, has no predetermined end and defies forecasting.

Smith often surprises his readers with unexpected clashes of thought. Although these ideas sometimes exceed his ability to integrate them coherently into his overall framework, they offer glimpses of a deeper truth that remains to be uncovered.

3. SMITH ON THE PROCESS OF CIVILIZATION

Smith viewed the economy and society as essentially intricately linked, self-organizing systems that generate internal change through an innate logic. Although these systems may not undergo significant changes for extended periods —maintaining their modes of production and

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[11] We agree with Eric Schliesser's (2015, p. 33) assertion that "For Smith theory is a research tool that allows for a potentially open-ended process of successive approximation" as regards the "Newtonian element" in his analysis. However, Smith also addresses a non-Newtonian element in the social sciences, which repeatedly challenges the idea of successive approximation by highlighting events that disrupt developmental continuity and force systems onto new paths governed by different rules and laws. In times of turmoil, existing theories may offer limited guidance to policymakers and the educated public. In *The Wealth of Nations*, Smith seeks to address a wide range of possibilities, which leads him to engage in speculation and describe his work as a "speculative work" (WN V.iii.68). The idea of science as a process of successive approximation therefore applies to periods of relative tranquility, rather than to times of major structural breaks, upheavals and instability. Well-read in history, Smith recognized such cases and focused on finding potential sources of undesirable developments and devising policy measures to prevent them.

distribution— alterations due to cumulative self-transformation may bring about radical shifts. For example, Smith explains the transition from feudalism to a "commercial society" by highlighting how foreign trade exposed English barons to luxuries, fundamentally altering their consumption patterns. Smith writes, "what all the violence of the feudal institutions could never have effected, the silent and insensible operation of foreign commerce and manufactures gradually brought about" (WN III. Iv.10). Foreign trade and import substitution gave the land-owning class access to extravagant "luxuries". Previously, feudal lords had to share their surplus with tenants and retainers due to a lack of alternative uses. Now they follow the maxim "All for themselves, and nothing for other people." Consequently, "for the gratification of the most childish, the meanest and the most sordid of all vanities, they gradually bartered their whole power and authority" (WN III. Iv.10)[12].

3.1. Stages of development

According to Smith, socioeconomic development will typically pass through several stages, broadly reflecting successive methods of producing, circulating and appropriating the wealth of a nation[13]. He distinguishes between three major stages, defined in terms of whether the objects and instruments of labor are privately owned and unevenly distributed amongst people. In the "original state of things," people use only primitive means of production and do not yet privately own land. In this stage, "the whole produce of labour belongs to the labourer. He

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[12] This example highlights how Smith believed that the unintended consequences of selfish behavior can, in the long run, have detrimental effects to parts of the population, that is, the decline of the landed gentry. *The Wealth of Nations* contains numerous instances of unintended consequences of this kind. While certain kinds of behavior might benefit others, such as towns and manufacturers, Smith viewed the decline of the feudal class as a necessary step toward the rise of a "commercial society," which he associated with potential improvements in "equality, liberty, and justice" (WN IV.ix.3). Yet Smith was uncertain about the continuation of the process of civilization due to the numerous challenges that the process faces; see Kurz (2024).

[13] Smith defines the stages in broad terms, which, borrowing a term Schumpeter used in a similar context, are economically, socially and culturally largely "underdetermined." This also applies to Smith's concept of "commercial society."

has neither landlord nor master to share with him" (WN I.viii.2). All economic power is in the hands of producers.

As soon as a few members of society privatize land, a two-class system emerges with workers and landlords. Landlords then demand and receive rent for the use of their land, which "makes the first deduction from the produce of the labour employed upon land" (WN I.viii.6). Smith explicitly refers to this rent as a "monopoly price" (WN I.xi.a.5) paid to the feudal aristocracy. Landlords could otherwise withdraw their land from productive use, threatening the survival of tenants. The exercise of economic power becomes significant in the distribution of products in Smith's analysis.

The third stage, in which produced means of production play a significant role and are in private and concentrated ownership, Smith explains why the bargaining position of workers in the conflict over the distribution of the product is weak: "It seldom happens that the person who tills the ground has wherewithal to maintain himself till he reaps the harvest" (WN I.viii.7). This situation also applies to "all arts and manufactures", where masters —owners of the "stock" (plant, equipment, and means of production and subsistence)— "advance the materials of their work, and their wages and maintenance till it be completed" (WN I.viii.8). Smith notes that workers are numerous but struggle to coordinate, while employers are few; he thus points to a serious problem of collective action. Workers also cannot strike or take other actions, while "masters" receive support from the government and public administration. This imbalance results in a "second deduction" from the produce of labor, which makes up profits.

3.2. Routes to accumulate wealth

Smith discusses three routes by which nations and individuals can become rich and accumulate wealth. These routes include:

- Waging war on other nations, engaging in robbery, and receiving tribute payments from subjugated peoples.
- Participating in foreign trade and advantageous exchange, such as "buying cheap and selling dear."
- Engaging in productive labor, developing industry, and harnessing the diligence of the domestic workforce through a deepening social division of labor.

The first route played a vital role in the early stages of societal development. However, with the discovery of new continents and nations, as well as new types of resources, goods, and production methods, the second route gained significance through various demonstration effects. During the mercantile era, diverse learning processes in production and consumption fundamentally affected society, the economy, and culture both domestically and internationally. As interdependent markets gradually extended across the globe, the world entered an era known as globalization. The "commercial society" began to dominate economic affairs, setting up a regime of competition characterized by rising productivity levels, growing outputs, and increasing transaction volumes within and between economies.

While Smith saw that the development of nations follows the pattern of the three consecutive stages, he did not believe that the first route to riches and wealth had become obsolete in modern times. Since economic development and growth in neighboring nations are typically not synchronous, an envious laggard might find it more appealing to attack a successful neighbor and seize whatever he can rather than undertaking the effort to produce it himself. Therefore, Smith warns that it would be a serious misunderstanding to assume that the first route, while seen by many as an atavism, is no longer relevant today and can be ignored. Differential speeds of development may lead to what are known as "Thucydides traps," potentially resulting in military conflicts[14].

According to Smith, a successful process of civilization consistently elevates human living conditions and guides society toward "the greatest happiness for the greatest numbers," as articulated by Smith's teacher and mentor at the University of Glasgow, the "unforgettable" Francis Hutcheson. This process establishes "the obvious and simple system of natural liberty" (WN IV.ix.51), which is founded on "equality, liberty,

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14 Smith was well-read in history and deeply admired Thucydides´ writings on the Peloponnesian War (see, for example, WN.V.i.a.5-7). Tensions between Sparta, a martial city-state that had long dominated the geopolitical territory, and Athens, whose rise threatened Sparta's supremacy, led to the war. This conflict lasted for 27 years (431-404 BCE) and exhausted both combatants. The brutal war that the Russian Federation has waged in Ukraine also fits the concept of a Thucydides trap. For more on this concept and major wars in history explained in these terms, see Allison (2017).

and justice" (WN IV.ix.3), and it serves to "enrich both the people and the sovereign" (WN IV.1). In summary, Smith outlines a framework where civilization's progress is measured by its ability to promote broad-based well-being and justice, creating a system that benefits both the populace and the state.

3.3. The concept of a "well-governed society"

Smith does not believe that a successful process of civilization will inevitably unfold without cause for concern. At the beginning of Book IV, "Of Systems of Political Oeconomy," Smith explicitly says that *The Wealth of Nations* aims to contribute to the science of a "statesman or legislator", providing direction and advice for ruling a country. And as early as Chapter I of Book I, Smith emphasizes that his primary concern is recognizing the characteristics of "a *well-governed society*" (WN I.i.10 emphasis added). Only in such a society can one presume that "the great multiplication of the production of all the different arts, in consequence of the division of labour, […] occasions […] that universal opulence which extends itself to the lowest ranks of the people" (WN I.i.10). Furthermore, only in a well-governed society will the "obvious and simple system of natural liberty" be favorable to all members of the nation, particularly the "labouring poor." This is not the case in societies that are not well governed. Hence many of Smith's statements do not apply in general but are tied to very strict requirements.

In his magnum opus, Smith begins with a *fundamental proviso* that readers cannot easily overlook. However, many have ignored this crucial point, resulting in interpretations that omit key passages of the text. For instance, Smith insists that a well-governed society may need to restrain "those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society" (WN II.ii.94), such as in the regulation of the banking trade. In addition, the "wisdom of the state" may be needed to break "the natural habits of the people [shaped by hedonism and the 'principle of avarice'] [that] render them altogether incapable of defending themselves" (WN V.i.a.15) in times of war. A proper understanding of *The Wealth of Nations* therefore presupposes two things: First, a proper understanding of his concept of "well-governed society" and, secondly, interpreting passages, in which he extols

the advantages of "the obvious and simple system of natural liberty", as extolling also its pre-condition: A well-governed society[15].

3.4. Counterfactual reasoning and the imputation problem

Comparing alternative states of a given economy —such as an ideal state versus an actual one— and attributing the difference between the two to specific factors involves counterfactual reasoning. However, Smith understood this is by no means an easy task. First, Smith insists,

> The natural effort of every individual to better his own condition, […] is so powerful a principle, that it is alone, and without any assistance, not only capable of carrying on the society to wealth and prosperity, but of surmounting a hundred impertinent obstructions with which the folly of human laws too often incumbers its operations (WN IV.v.b.43).

In certain cases, the deviations from the ideal state are small because people can circumvent the "folly of human laws" or adapt to them. While mercantilist policy may forgo opportunities for economic growth and development, it typically does not exclude them entirely.

Public discussions often misunderstand the causes of particular effects. In such cases, political economy sets the record straight. Smith's most significant example of this involves the popularity and influence of the "mercantile or commercial system," championed in France by Louis XIV's minister, Colbert, despite its many deficiencies and shortcomings. Smith argues that people have credited mercantilism with achievements that do not belong to it.

In a section titled "Of the Advantages Europe has derived from the Discovery of America, and from that of a Passage to the East Indies by the Cape of Good Hope," Smith refers to these two events as "the two greatest and most important [ones] recorded in the history of mankind" (WN IV.vii.c.80). He then links the rise of mercantilist doctrines to "all sorts of improvements which an extensive commerce from all coun-

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[15] We may in this context also recall Smith's attitude in dealing with the mercantile system in *The Wealth of Nations*: "if the rod be bent too much one way, says the proverb, in order to make it straight you must bend it as much the other." (WN IV.ix.4).

tries to all countries naturally, or rather necessarily, carries along with it" (WN IV.vii.c.80), and concludes that "one of the principal effects of those discoveries has been to raise the mercantile system to a degree of splendour and glory which it could never otherwise have attained."

European commercial towns and manufacturers benefited from the expansion of foreign trade, becoming the primary producers for nations across Asia, Africa, and America. "Two new worlds have been opened to their industry, each of them much greater and more extensive than the old one" (WN IV.vii.c.81). Yet this mercantilistic development path runs counter to Smith's ideal, which emphasizes the development of agriculture rather than industry and towns. In view of Smith's above argument, one may wonder which system then is superior, the mercantilist one or his own?

3.5. Smith's "physiocratic prejudice"

Smith's reasoning reflects what Piero Sraffa referred to as Smith's "physiocratic prejudice." Smith insists that agriculture —specifically corn production— is the most productive sector of the economy. He argues this because nature collaborates with laborers in agriculture at no cost. As already Ricardo objected to this view, are not the sails of the ships of merchants swollen by the winds and would not industry be in trouble without the pressure of the air? A closer examination of Smith's flawed argument reveals that he singled out corn as the only "basic" product in the economic system, necessary directly or indirectly in the production of all products, including itself. Smith in fact emphasized "the great and essential difference which nature has established between corn and almost every other sort of goods" (WN IV.v.a.23), highlighting corn's indispensability in all lines of production, either as a material input (*e.g.*, seed corn in agriculture or as an input in whiskey production) or as a necessary means of sustaining workers[16].

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[16] François Quesnay's *Tableau économique* reveals that he was less "physiocratic" than Smith. Quesnay recognized that not only "corn" but also the industrial product "iron" was essential for the production of both agricultural and industrial products. Hence, Quesnay considered both corn and iron indispensable in all lines of production and therefore as basics (See Meek, 1963, and Gehrke in this issue).

What Smith failed to recognize —at least with sufficient clarity, aside from incidental remarks throughout his works— was that manufacturing was poised to become the "engine of growth" by putting out several commodities that assumed the character of basics for the system as a whole, whereas other commodities were relegated to the status of non-basics. The new age, in short, was becoming an "age of coal and iron", rather than corn and wood. Although Smith clearly understood the manufacturing sector's capability for realizing a rapidly expanding division of labor, much larger than in agriculture and other sectors, and the accompanying swift rise in labor productivity, he missed the sector's fundamental role as the pinnacle of economic dynamism for the entire economic system.

3.6. What remains?

What remains of Smith's uncompromising attack on the mercantilist doctrine in Chapters I-VIII of Book IV? We cannot accept his critique in its entirety (see also Kurz, 2019). Since his concept of a "natural course of events" is based on the dubious ranking of economic sectors according to labor productivity, his entire counterfactual reasoning in this context must be reassessed and replaced with a more compelling alternative. Smith's criticism of the public promotion of the development of towns and industry is excessive, if not entirely mistaken. We should replace this criticism with a more balanced assessment of the possibilities and limits of industrial policy (Kurz, 2019).

However, certain aspects of Smith's work still hold value. We should not dismiss counterfactual reasoning simply because a particular example of it lacks conviction. Counterfactual reasoning is an indispensable tool in the social sciences, deserving thorough elaboration with full recognition of its difficulties. This tool contributes not only to refining economic theory but also to guiding the collection and investigation of empirical evidence upon which economic policies should be based. We must jointly undertake the elaboration of economic theory, empirical studies, and evidence-based policies. While Smith's analysis suffers from his "physiocratic prejudice," it nevertheless highlights an important insight: Economic sectors producing non-basic products are of no import when it comes to assessing the surplus-generating capacity of the economic system as a whole and, a fortiori, its potential to grow;

only sectors producing basic products are (*cf.* Sraffa, 1960, pp. 7-8). Since Smith perceived the manufacturing sector as producing primarily non-basics ("luxuries"), he did not consider it on par with agriculture, which he associated with the production of "corn." Despite his factual errors, Smith was imaginative in his analytical approach and enriched our understanding.

A related observation concerns Smith's doctrine of a tendency of the general rate of profit to fall. Although we cannot sustain his explanation that capital accumulation intensifies capital competition, we should ask: What is a consequence of his view that technological advances involve only "improvements" of known technologies, rather than genuine innovations? Such improvements reflect demonstration and learning effects brought about by the opening of trade and access to the knowledge incorporated in technologies worldwide —they reflect approaching the technological knowledge frontier of the world, but no significant moves outwards of that frontier. As nations approach the frontier, technological advances are bound to slow down, resulting possibly in a decline in the general rate of profit[17]. However, if there is no such technological knowledge frontier, things are different.

Let us now turn briefly to the first eight chapters of Book IV of *The Wealth of Nations*, where Smith critiques mercantilist economic policy (see also Kurz, 2019). Although Smith failed on a grand scale in his comparison of actual economic development with the hypothetical development that might have occurred without the misdirection of mercantilist misconceptions, several (but not all) of his objections are reasonable and deserve consideration.

3.7. The mercantile system

Smith argues bitterly against mercantilism, particularly in regard to England, asserting that it has elevated "the sneaking arts of underling

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[17] Allyn Young rightly praises Smith's view of a deepening social division of labor, which centers on the concept of circular and cumulative causation and dynamically increasing returns —Young regards this as Smith's "central theorem" and "one of the most illuminating and fruitful generalizations" in economics (Young, 1928, p. 529). While we agree with Young, we must also acknowledge that Smith's physiocratic prejudice unfortunately undermines this "fruitful generalization."

tradesmen […] into political maxims for the conduct of a great empire" (WN IV.iii.c.8). The Mercantilist perspective erroneously teaches that gold and silver in the coffers of the king represent the wealth of the nation, while it is the size of the social product; and with the introduction of paper money, precious metals have lost in importance for the circulation of commodities. The main political instruments of mercantilism include privileges and artificial "monopolies" granted to specific members of the nation, disadvantaging others. This involves an allocation of capital and labor in directions that differ from those in which they would otherwise have been employed, reflecting the knowledge of those who face discrimination. Consequently, the country will experience a lower rate of economic growth and development. What Smith misses here, for example, is that export promotion and import restriction amount to a beggar-my neighbor policy that has positive employment and growth effects at home and negative ones abroad.

The privileges of the "East India Company" was the worst case of policy failure according to Smith. These privileges led to "savage injustice of the Europeans [and] rendered an event [foreign trade and globalization], which ought to have been beneficial to all, ruinous and destructive to several of those unfortunate countries" (WN IV.i.32). The ultra long-term effects of the necessarily barbarous and cruel political rule of merchants are disastrous: "Such exclusive companies […] are a nuisance in every respect; always more or less inconvenient to the countries in which they are established, and destructive to those which have the misfortune to fall under their government" (WN IV.vii.c.108).

Smith's pragmatic approach to economic policy, becomes clear in his analysis of when and why legal monopolies (*e.g.*, the Navigation Act) are justifiable (see the paper by Sturn in this issue). He is extremely critical of import restrictions because they serve specific interests masquerading as the general interest. These restrictions reflect the "wretched spirit of monopoly," which is constantly seeking privileges and opportunities to limit competition. Smith also scrutinizes export promotion and criticizes the promotion of corn —his "good of goods." He discusses the pros and cons of trade contracts and condemns the misguided pursuit of balanced trade with each partner, rather than with the rest of the world. Moreover, he addresses the foundation of colonies, noting that while they can induce learning and catching-up processes, mercantile practices have

distorted this potential. Given the circumstances, Smith concludes that England would benefit more if it allowed its colonies to become free.

4. CONCLUDING REMARKS

In his critique of the Mercantile System, Adam Smith used counterfactual reasoning to compare the actual economic path with what he defined as the "natural course of events." He aimed "to expose the folly of a system, which fatal experience has now sufficiently exposed" (WN IV.viii.15). Influenced by polymath Isaac Newton, mathematician Robert Simson, moral philosopher Francis Hutcheson, and historian-philosopher David Hume, Smith integrated and adapted their ideas to develop a social theory addressing the process of civilization and its inherent challenges.

It is not surprising that Smith was unable to complete this ambitious task. However, his achievements remain remarkable, offering methodological, theoretical, and empirical contributions that continue to provide fresh perspectives on economic issues. By significantly elevating the role of "what if?" questions in modern economics, Smith emphasized the necessity of counterfactual reasoning in economic policy discussions to explore alternative realities, even though others have often adopted this approach in problematic ways[18].

Smith's attempt to "reconcile reason with experience," as Hume phrased it, was only moderately successful. His physiocratic bias limits his insightful critique of mercantilism, anchoring his thinking in what we might call the age of corn and leading him to only tentatively engage with the emerging age of iron and coal. This bias led him to overlook the rapidly growing importance of towns and manufacturing in the economy

[18] Kurz, Salvadori, and Signorino (2024) discuss Sraffa's criticism, found in his unpublished papers from the late 1920s, of Alfred Marshall's theory of value and distribution. Sraffa introduced ideas that later gained prominence in the philosophy of counterfactual reasoning (Lewis, 1973a). Sraffa questioned the adequacy of simple analyses of singular causation in terms of counterfactuals, which are prominent in marginalist analysis. For example, marginalist analysis often considers the effects of an isolated increase or decrease of a factor input, such as an "additional dose of capital," or a change in preferences, *ceteris paribus,* on the economy. However, Sraffa insists, it matters where the additional dose of capital comes from or how precisely preferences change, and he shows that Marshall's partial equilibrium analysis cannot generally be sustained.

and society, undermining his criticisms of certain mercantilist policies. Moreover, his mistaken belief that nature labors for free in agriculture, but not in other sectors, resulted in his conclusion that agriculture remains the most productive sector. This belief prevented him from fully developing his concept of circular and cumulative causation, which, in turn, limited the potential of his idea that manufacturing could drive a more significant productivity-enhancing social division of labor and dynamically increasing returns to scale. Consequently, Smith's concept of the "natural course of events" fell short as a definitive benchmark for assessing economic development.

Despite these shortcomings, Smith provided a wealth of insights that have profoundly shaped our understanding of economic theory and policy. Subsequent critics and scholars have refined these insights, correcting his errors and building upon the solid foundations he established. ◄

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