

The argumentative structure of the *Wealth of Nations*

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Abstract. The paper sheds fresh light on what Adam Smith was doing in writing the *Wealth of Nations* by looking at its place in his unaccomplished oeuvre. The *Wealth of Nations* is just a *partial* implementation of a *part* of his project: the history and theory of law and government. In this work, the ‘Socratic method’ of persuasion and the ‘Newtonian method’ of didactical discourse coexist with moral discourse. Such coexistence allows a smooth transition from (i) an argument aimed at persuading the public opinion of the advantage carried by non-aggressive commercial policies, high wages and provision of public goods by the public authority to (ii) a simplified reconstruction of economic mechanisms and tendencies through either conjectural history or ‘systems’, and (iii) an argument showing how all the oppressive inequality existent in modern societies is, besides deplorable on *whatever* moral standard, contrary to everybody’s interest.

Keywords: Adam Smith; political economy; rhetoric; method.

JEL Classification: A 12, B12, B31

[es] La estructura argumentativa de la Riqueza de las Naciones

Resumen. Este artículo arroja una nueva luz sobre lo que Adam Smith estaba haciendo al escribir la *Riqueza de las Naciones* examinando el lugar que ocupa en su obra inconclusa, eso es, una realización parcial de una parte de su proyecto: la historia y teoría del derecho y del gobierno. En la *Riqueza de las Naciones*, el ‘método socrático’ de persuasión y el ‘método newtoniano’ del discurso didáctico coexisten con el discurso moral. La coexistencia permite una transición desde (i) un argumento dirigido a persuadir a la opinión pública de la ventaja que conllevan unas políticas comerciales no agresivas, salarios elevados y alguna provisión de bienes públicos por parte de la autoridad pública a (ii) una reconstrucción simplificada de los mecanismos y tendencias económicas a través de la historia conjetural o de los ‘sistemas’ y (iii) un argumento que muestra cómo toda la desigualdad opresiva existente en las sociedades modernas es, además de deplorable, contraria al interés de todos.

Palabras clave: Adam Smith; economía política; retórica; método.

Classificación JEL: A 12, B12, B31

[pt] A estrutura argumentativa de A Riqueza das Nações

Abstrato. O artigo lança uma nova luz sobre o que Adam Smith estava fazendo ao escrever a *Riqueza das Nações* observando seu lugar em sua obra inacabada. A *Riqueza das Nações* é apenas uma implementação parcial de uma parte de seu projeto: a história e a teoria do direito e do governo. Nesta obra, o ‘método socrático’ de persuasão e o ‘método newtoniano’ de discurso didático coexistem com o discurso moral. Tal coexistência permite uma transição suave de (i) um argumento destinado a persuadir a opinião pública da vantagem trazida por políticas comerciais não agressivas, altos salários e provisão de bens públicos pelo poder público para (ii) uma reconstrução simplificada dos mecanismos econômicos e tendências através da história conjetural ou ‘sistemas’, e (iii) um argumento mostrando como toda a desigualdade opressiva existente nas sociedades modernas é, além de deplorável sob qualquer padrão moral, contrária ao interesse de todos.

Palavras-chave: Adam Smith; economia política; retórica; método.

Classificação JEL: A 12, B12, B31

1. From the history and theory of government and law to a tract on British commercial policies

The *Wealth of Nations* is a two-faced work: a “book of persuasion, a very long Socratic type of dialogue on British economic policy” and “also a scientific treatise” (Pack 1991, p. 109), both an “analysis of how economies work in general” and a work directed to argue a “polemical point, the mercantilist and Physiocratic attempt to have the state control or guide economic production are misguided”, ‘simultaneously a “treatise” and a “tract” (Fleischacker 1995, p. 15).

The present paper reconstructs first Adam Smith’s views on rhetoric and the original plan for his oeuvre, comprising

three “great works”; then, the blueprint of the *Wealth of Nations*, a sustained argument designed to lead readers to moral and political conclusions with which they would have disagreed if confronted with them at the beginning; thirdly, the role of historical reconstructions in this argument; fourthly, it indicates those parts of the work where the author builds “imaginary machines” bringing connectedness between disconnected phenomena; fifthly, it singles out two kinds of “principles” the author resorts to in the construction of such imaginary machines; sixthly, it illustrates the “synthesis”, the process through which phenomena are deduced from the principles, thus convincing the readers that such and such phenomena are due to such and such causes and, as a side effect, destroying deeply rooted prejudice; the seventh and final step is a refutation of the claim that the work contributed to the demoralisation of political economy, showing how precisely the, highly Humean, task of dismantling laws we did not frame but must obey opens the space for obvious considerations of justice that common sense is ready to endorse as soon as imaginary entities are dismantled such as the balance of trade and the identification of wealth with gold and silver.

One recent version of *das Adam Smith Problem* was Vivienne Brown’s opposition of a dialogical approach in the *Moral Sentiments* with a didactic approach in the *Wealth of Nations*. The former work is “dialogical” in structure since the discourse is in a “plural” voice, at times that of the author, the reader, and the community of fellow beings. The latter is monological since the discourse is enounced “in a voice corresponding to that of the impersonal and didactic philosopher” (Brown 1994, p. 43). Her merit – shared with McCloskey (1985) – has been that of awakening the economists’ interest in rhetoric. Possible objections are: first, the implication she draws on Smithian ethics: that the didactic voice of *Wealth of Nations* leaves the work devoid of any genuine moral concern, that “the neo-Stoic Smith’s discourse has contributed to the demoralisation of economic and political categories and to the construction of an economic canon in which moral debate has virtually no place” (p. 220); secondly, her assumption that the didactic voice in the *Wealth of Nations* is more assumed than proved, ignoring the work’s polemical strategy, its moral diagnosis of the pitfalls of commercial society, its recourse to irony at crucial points and the metaphorical texture of its conceptualisation.

2. Adam Smith’s unwritten doctrines

In 1785, Smith wrote to the Duke de la Rochefoucauld that he had “two other great works upon the anvil: the one is a sort of Philosophical History of all different branches of Literature, of Philosophy, Poetry and eloquence; the other is a sort of Theory and History of Law and government” (Smith 1997, p. 287). In

1790, in the preface to the sixth edition of the *Theory of Moral Sentiments*, he wrote that in the *Wealth of Nations* he had “partly executed” the promise he had formulated in the last paragraph to give, in another discourse, “an account of the general principles of law and government, at least so far as concerns police, revenue, and arms” (Smith 1759, p. 3).

He ordered to burn his manuscripts on his deathbed. This decision was a source of wasted effort for posterity: the *Lectures on Jurisprudence* were ignored until the end of the nineteenth century, and the *Rhetorick Lectures* well into the twentieth century. However, fortunately, thanks to the discovery of student lecture notes, we now know the main contents of the “History and Theory of Law and Government”. The *Wealth of Nations* is the *partial implementation* of the planned political work. It is *partial* in a strong sense: it is a complex exercise in communication, aimed to persuade how the best way for the ruler to carry out one of his tasks, ensuring the abundance of provisions, consists not of unnatural or artificial measures based on complex and abstract theories, but in the self-limitation of his intervention accompanied by action aimed at ensuring respect for justice and liberty. Within such a framework, the least bad policies would implement themselves in a “natural” way – in the Aristotelian sense of the distinction of violent and natural motions – as a result of the interplay of the action of individuals aimed to better their condition combined with a remarkable, on eighteenth-century standards, action by the legislator to ensure the provision of a few public goods.

3. Adam Smith’s rhetoric

Let us take a step back. Much of what the author wanted to do may be detected by looking at his *Rhetorick Lectures*, whose manuscript was discovered no sooner than 1958, the reason why it enjoyed less attention than others until now. A few attempts to put *The Principles which Lead and Direct Philosophical Enquiries* to work in reading the *Wealth of Nations* started about seventy years ago (Bittermann 1940; cf. Lindgren 1973, pp. 1-3; Cremaschi 1984, pp. 46-7, 115-8). As mentioned, Vivienne Brown did contribute to awakening attention to language and rhetoric in Smith’s oeuvre. However, she downplayed his rhetoric while putting Bakhtin’s theories of language and communication at work instead, with the unsurprising conclusion that they are not very fruitful when applied to the *Wealth of Nations*. Nevertheless, there had already been contributions dedicated to Smithian rhetoric (Bevilacqua 1965; 1968; Skinner 1983; cf. Brown 2016), and there have been more recent suggestions to put the lectures on rhetoric to work for reading

the *Wealth of Nations* (Cremaschi 1984, pp. 118-126; 2002; 2017a; McKenna 2008, pp. 133-47; Pack 1991, pp. 105-18; Trincado 2019, pp. 156-215; Ortmann and Walvaerens 2022, pp. 31-65; López Lloret 2019, 2021a, 2021b).

At few salient points of these lectures deserve mention here. The first is Smith's conjectural history of the origins and development of language exposed in the second lecture (Smith 1963 II, pp. 3-8), a topic so crucial for him that he published an expanded version of this lecture, the *Considerations concerning the First Formation of Languages* (Smith 1767). In his view, language arises from human nature, but language does not derive from one essential quality of human nature. It arises gradually out of a natural tendency of the imagination to associate sounds with events. Savages started associating shouts with situations to make their mutual wants intelligible to each other. In the beginning was the Verb. The second step was its subdivision into its "metaphysical parts": proper names, common names, and terms used to designate first properties and then relations. The pronoun "I" and the verb "to be" were the apex of abstraction, the most "metaphysical" terms (Smith 1767, pp. 242-3). Not unlike the evolution of languages, also that of the sciences depends on a tendency to reduce phenomena to a few principles, as illustrated in *Philosophical Enquiries* (Smith 1795a Logic 1, pp. 118-20). Indeed, Smith's social theory rests on the origins of language as the birth of social interaction and social institutions, from the market to law and religion (López Lloret 2019, 2021b).

The second point worth illustrating is the characterisation of didactical writing from lecture XXIV: a discourse where the writer intends "to lay down a proposition and prove this by the different arguments which lead to that conclusion" (Smith 1963 XXIV, p. 143). There are two methods in this writing: either we proceed like Aristotle, going "over the Different branches of Natural Philosophy, or any other science of that sort [...] in the order they happen to cast up to us, giving a principle commonly a new one for every phenomenon" (XXIV, pp. 145-6) or, like Newton, laying "down certain principles" known or proved from the beginning to account for different phenomena by them (XXIV, p. 145). Smith calls this method "Newtonian" inappropriately since he immediately adds that Descartes was the first to use it, and we may add that it was no more than the Schoolmen's *mos geometricus* following Euclides's *Elements* as a model. The third is the characterisation of "historical writing" in lectures XVII-XVIII, the kind of writing that describes the more interesting and important events of human life and points out the causes which brought about these events. It is complementary to "didactical writing" since both may treat the same subject, as far as they discuss human society, but with different starting points and sequences of steps; not unlike deliberative discourse, didactical discourse consists of two parts: "the proposition one wants to prove, and the proof that is brought to confirm this" (XVII, p. 88); historical discourse consists instead of one part: the narrative of facts. The preoccupation of the historian is reporting events in proper order, most of the time the order in which they happened, providing the cause for each of them. The connexion of cause and effect is the focus of historical writing, and the narrative should not leave any gap in the succession of events, the same requirement holding for theories according to *Philosophical Enquiries*.

The fourth point is the definition in lecture VI, among other figures of speech, of metaphor, classically defined as *translatio*, a transfer consisting in a description of one object by "an allusion betwixt one object and another" (VI, p. 29). We will note its frequent presence in the *Wealth of Nations*.

The fifth point is the definition of deliberative eloquence, the kind of discourse developed by the ancients in assemblies deliberating on matters of consequence to the State. This genre seldom offers any occasion for divisions and subdivisions. Its arguments are "so evident as not to require any elaborate explanation" (XXV, p. 138). Though in deliberative eloquence "there is seldom occasion for" the didactic method which is "hardly ever applicable to Rhetoricall discourse" (XXIV, pp. 134-6), we will see how the *Wealth of Nations*'s line of argument encapsulates didactic writing at crucial points. There are two "deliberative rhetoric" methods: the Socratic and the Aristotelian. The latter is a "harsh and unmannerly one where we affirm the thing we are to prove, boldly at the beginning, and when any point is controverted begin by proving that very thing and so on" (XXIV, p. 147). The first is the "smoothest the most engaging". It is recommended when an audience is prejudiced against the opinion we want to promote: we should avoid to shock them by rudely affirming what we know is disagreeable to them, but we should "bring them slowly to the thing to be proved" (XXIV, p. 146; cf. Endres 1991, p. 79). The structure of the *Wealth of Nations*, though including historical and didactic parts, takes precisely the Socratic method as a model. It makes room for the two parts of discourse whose necessity only Smith admits, the proposition and its proof. Note that, in *Moral Sentiments*, the proposition is enounced in the first sentence of the work; in the *Wealth of Nations*, it comes at the end of Book IV, if we consider its theoretical side, the system of natural liberty, or at the end of Book V if we consider its immediate application, no taxation without representation for American colonists.

Within this framework, pieces are assembled of "conjectural history" and "well authenticated history" (Smith 1776 V.i.a.29, p. 702) together with "systems" or "theories" or "imaginary machines" filling the gaps between disjointed phenomena. Though adopting at several points the "Newtonian method" of "didactical discourse", the *Wealth of Nations* is deliberative eloquence adopting the "Socratic method", it resorts systematically to metaphor in the didactical parts and, when it comes to "dialogue" with false doctrines, it shifts from matter-of-fact considerations to irony or

sarcasm. Besides, far from limiting itself to matter-of-fact considerations, it engages at decisive points in moral argument, well summarised in a famous invective against “the vile maxim of the masters of mankind” (III.iv.10, p. 418).

4. Adam Smith’s audience

Adam Smith’s audience was not primarily a scholarly one. His readers were educated people in the middling stations of life, the easiest to persuade, and politicians, the dupes of merchants and master manufacturers. Given the goals and circumstances, the Socratic method was the best option. What he later described in a letter to Andreas Holt as his “very violent attack” upon the “whole commercial system of Great Britain” (Smith 1997, p. 251) was conducted in this gentle manner. His practice closely matches the description of the Socratic method in the *Rhetorick Lectures*. What he did is the following:

- a. he developed one part of a subject he had planned to treat in one of the two never completed works into a self-contained discourse, feeling there was a demand for treatises on commercial and fiscal policies due to political debates; he argued that there are indeed evident principles virtually shared by everybody in support of his claims;
- b. he mounted a rhetorical strategy to persuade his readers of the goodness of free trade and the dangerous character of monopolies;
- c. as part of his argument, he conducted historical expositions, that is, chains of causes and effects and a few “systems” connecting phenomena that looked disjointed at first sight through facts of which we have daily experience;
- d. the chains of causes or phenomena and principles, highlighted respectively by history and systems, produce the effect of eliminating “wonder” (Cremaschi 1984, pp. 41-2, 154-5; Pack 1995) by solving the paradox of modern society: how the meanest labourer is better endowed with material goods than the king of savages;
- e. he tried to show how free trade was good for the growth of opulence, the ensuing better condition of the poor and the quality of civic life;
- f. he diagnosed several social evils and tried to show how the sources of those evils may be traced in both old institutions and new practices, such as aggressive commercial policies.

Furthermore, as regards polemical tactics:

- a. he invented a category, the “mercantile system”, and classified almost everybody he disliked as “mercantile”; he practised irony to expose the absurdity of the merchants’ policy recommendations and attacked “mercantilist” James Stuart without ever mentioning him;
- b. he reconstructed the system of the French economists or the “agricultural system” as an implausible system, though he favoured the same policies and took theoretical elements from them.

Methodological discussions are absent from *Wealth of Nations*. Smith purportedly gave the impression that, also in this work, the handful of assumptions with which he worked were “no more than common sense which every one assents to” (Smith 1963 XI, p. 56). He did so precisely because his strategy was to lead the reader step-to-step from agreed-upon facts to conclusions he was not prepared to accept.

His venture into political communication obeyed a rhetorical strategy resorting to Scottish intellectual weaponry. It resorted at various points either to well-documented history for those epochs which left written testimonies or conjectural history for the first stages of humankind’s evolution and to “system” when the goal was to account for familiar phenomena proving that they are the effect of human action but not human design.

5. The *Wealth of Nations* as history

In the *Wealth of Nations*, Smith wrote history of two different kinds. Most of the time, it was “well documented” history based on written sources. Occasionally, less frequently than in the *Lectures on Jurisprudence*, it was “conjectural” history based on a “few insulated facts” which have been “collected from the casual observations of travellers, who have viewed the arrangements of rude nations” and then “supplying the place of fact by conjecture” (Stewart 1794, pp. 92-93). It was a peculiar Scottish discipline, an attempt to start an evolutionary study of human societies giving up such notions as the state of nature and rejecting Rousseau’s assumption of a non-social state of the “natural man”. It was an account of institutions, laws and customs based on an unchanging human nature’s reactions to varying conditions. Though historical discourse, it is an expression of “experimental” philosophy in the Scottish sense. That is, the principles of human nature resorted to, though not “original qualities”, are assumed to be plausible as far as they result from observation of both civilised human beings, Europeans, and savages, American Indians. Of course, these principles depend on experience, but we would look in vain, in neither the *Wealth of Nations* nor *Moral Sentiments*, for the “science of human nature” promised by Hume. Hume himself, after 1740, seems to admit that such

a science is impossible since we cannot observe human nature in a void. The dream of such a science was the last vestige of Cartesianism still maintained by semi-sceptical Hume and ironically thrown overboard by his even less sceptical follower.

The background of the Scottish historical discipline includes Linnaeus, Buffon, Montesquieu, Voltaire and Turgot, resulting from a combination of the idea of the *natural history of man*, or a study of the species *homo* as one entry in the classification of the species, and the *natural history of humankind* or an attempt to compare distinct human groups in historical context (Sebastiani 2008, pp. 168-9). The Scottish conjectural history yielded the four-stages theory, an account of history according to which institutions, starting with language, originated from responses by human nature to the varying challenges set by external conditions. The propelling engine of evolution is the mode of subsistence.

6. *The Wealth of Nations* as “experimental philosophy”

Smith resorts to didactic writing in some parts of the work: he lays “down certain principles [...] afterwards confirmed by examples” (Smith 1963 XVII, pp. 90-1).

In the Scottish jargon, “experimental philosophy” or the “Newtonian philosophy” indicates the Royal Society tradition and Newton’s work as its culmination. After Popkin’s work on the history of modern philosophy, the role of neo-Phyrronianism has been clarified, opening a novel scenario that no intellectual historian can ignore. The two salient elements of this renewed scenario are as follows. First, scepticism is almost ubiquitous in modern philosophical discussions, and philosophers were trying to answer the sceptical challenge. Secondly, scepticism is a more limited phenomenon than the received history of philosophy made us believe (Popkin 2003, pp. 64-79, 112-27).

Neo-Phyrronianism, more than a philosophical school, was a religious-political movement. Sceptics were people like Montaigne, who wanted to find a way to coexist with religious pluralism and the opposite fact of persecution through a strategy of conformity on the public ground and refusal of conformity on the domestic ground. On such reading, authors such as Hobbes, refuted by everybody as licentious authors, were opponents of scepticism looking for some minimal basis for civic coexistence by conceding the sceptic partner as much as possible and then working out a constructive part of the discourse on such a minimal basis as could not be denied even by the sceptic (pp. 189-207). Hume was “the first post-sceptical thinker of the modern age” (Norton 1993, p. 1), practising an insulating strategy to draw a protective belt against sceptical doubt, admitting that doubt is justified on principle but irrelevant in everyday life (Burnyeat 1984). Hume’s is an insulating strategy, distinguishing the dogmatic sceptic from the “true sceptic”, who is capable of doubting his doubts and subject matters beyond our cognitive faculties and those where at least “moral reasoning” is plausible. Belief is indeed all we have, but this implies that we *have* something. Thus, the course of Scottish Philosophy is marked by shifting emphasis on this central claim: for Hume, we have no firmer ground than belief; for Reid, we do have firm ground, that is, belief; Adam Smith’s epistemology lies somewhere in between. The formula post-scepticism may be a description alternative to Griswold’s description as “scepticism” without qualifications (Griswold 1999), a description resting on a misunderstanding singled out by Peter Geach (1956) when he pointed out that being a small elephant hardly implies being an elephant and being small. Thus, being a “sceptical chemist” like Robert Boyle hardly implies being a chemist and a sceptic; it just implies not being an alchemist. The same holds for Adam Smith’s “sceptical Whiggism” (Forbes 1975) or “sceptical Newtonianism” (Cremaschi 1989), hardly implying that Smith was a sceptic and a Whig, or a sceptic and a Newtonian. In these occurrences, “sceptical” is a predicative adjective that qualifies the name. While Griswold’s classification is a severe misunderstanding, Schliesser’s classification of his epistemology as “modest realism” (Schliesser 2017, pp. 255–287) makes plain sense and yet fails to look at it in eighteenth-century context and ends up with an evasive formula, more the name of a problem than a solution.

A reasonable assessment is that Smith was, no less than Hume, a post-sceptical thinker, and yet he was critical of his friend and mentor, systematically emphasising the constructive side of post-scepticism, struggling to find a North-West passage between rationalism and scepticism in epistemology, ethics, politics and the theory of religion. He tried to find ways out of what he felt to be Hume’s central difficulty, the inability to reform common sense. Hume tended to leave common sense as an ultimate ground. Smith argued the possibility of reforming it by admitting quasi-transcendental constraints to our theories dictated by practice. This admission yielded his account of the invention and improvement of machines, his *reductio ad absurdum* of Stoic theological consequentialism, his “anti-proof” of God’s existence, and “the obvious and simple system of natural liberty”. This admission makes him Kant’s cousin from across the Channel and Peirce’s great-uncle from across the Atlantic.

During the first half of the eighteenth century, Newton’s work became the emblem of the “new philosophy”, a methodology to follow in every field, and the divide between the friends and the enemies of “Reason”. Aristotelianism, with its occult qualities and substantial forms mocked by seventeenth-century philosophers, was no longer perceived

as a real danger, and the villain became Descartes instead, in Smith's words, the author of "one of the most entertaining romances that have ever been wrote" (Smith 1963 XXIV, p. 146). The reasons for animosity were not exclusively theoretical. British chauvinism was one of them. Indeed, Descartes's philosophy was a decisive chapter of the history of conquest/assimilation of scepticism (Popkin 2003, pp. 143-173). Hume owed Descartes a couple of his starting points: his theory of ideas and the mind-body dichotomy (Talmor 1980) and tried to work out his way out of scepticism in a way different from Descartes's. Nonetheless, the shared ground for Hume and the other Scottish enlighteners was a more or less direct refutation of scepticism in the name of its impracticability in the real world.

At the beginning of his career, Adam Smith wrote that the Cartesian natural philosophy was "almost universally exploded" although "in the simplicity, precision and perspicuity of its principles and conclusions, it had the same superiority over the Peripatetic system, which the Newtonian philosophy has over it" (Smith, 1756, p. 244). The Scots launched the myth of the "Newtonian philosophy" as the third way between rationalism and scepticism, sanctifying Newton and making Descartes a straw man, far beyond the theoretical errors they denounced. They announced the need to apply the Newtonian method to every field, not just natural philosophy but also practical philosophy, restructuring it to launch a new science of natural jurisprudence. They opposed Newton to Descartes as the founder of an "experimental" anti-deductive and even anti-mathematical tradition (Cremaschi 2009). The first target of their attack was the Cartesian natural philosophy with its theory of vortexes, but they also brought in strictly philosophical arguments as asides. Considering just Adam Smith, we may mention that he asserted that the distinction between primary and secondary qualities is unjustified: the four qualities of extension, divisibility, figure, and mobility are inseparable from the idea of solid substance, yet, the "very rash conclusion" that the solid substance cannot possess other qualities has been "insisted upon, as an axiom of the most indubitable certainty, by philosophers of very eminent reputation" (Smith, 1795b, p. 137). Descartes' natural philosophy is mistaken, and his main vice was not paying attention to observations carried out by others, but it was able to win an audience because its main mistake corresponds to one basic need of our imagination: a desire for simplification (Smith 1795a Astronomy IV.67, pp. 97-98; cf. Cremaschi, 2000).

That the *Wealth of Nations* was a sample of "Newtonian philosophy" may have been self-evident to the most learned readers. A letter by Robert Pownall describes the work in these terms: it aims to establish principles that would carry out, in the "knowledge of politick operations", the function of mathematics in mechanics and astronomy. It consists of an "analysis" establishing the principles "by which nature first moves and then conducts the operations of man" and a "synthesis" which, from the principles established and observed facts, derives a few "important doctrines of practice" (Pownall 1776, p. 337). When Smith comments on Pownall's objections in a letter to Andreas Holt of 26 Oct 1780 (Smith 1997, p. 250), he does not object to his interpretation, possibly accepting it as obvious.

For readers less versed in the history of logic, analysis and synthesis indicate two steps of scientific explanation in eighteenth-century usage: the former goes back from phenomena to principles and the latter accounts for phenomena from the principles established. These terms substituted Robert Grosseteste's *resolutio* and *compositio*, designating the a priori and the a posteriori proof (*quod* and *quia* or *inductio* and *deductio*). In early modern times, the medieval distinction was replaced by that between discovery and exposition of results. For example, Descartes describes analysis as the path of discovery showing how effects depend on causes. Newton instead assumed that analysis and synthesis were two phases of one method, where analysis consists of experiments and observations yielding general laws, and synthesis confirms such laws through the prediction of facts.

7. Analysis: principles of human nature

Smith's way of proceeding in natural history implies a search for causal links between qualities of human nature and observed phenomena. Those traits do not include *all* the characteristics of human nature but only those that may help establish causal chains. Far from being "original qualities", they are principles whose effects we observe in ordinary life, possibly deriving from deeper ones (Cremaschi 1984, pp. 138-42). The Principles invoked in the *Wealth of Nations* are the following.

a. *Passions*. They are states of the mind which are causes of human action, not unlike forces are causes of motion in the physical world. An explicit discussion takes place extensively in the *Moral Sentiments* and occasionally in the *Wealth of Nations*. An exploded interpretation has been the "containment view", according to which *Moral Sentiments* presents a general theory of human nature, and *Wealth of Nations* puts a more restricted view into operation. Contrary to what Brown thought, the former work is a didactic discourse, laying the principles open at the start and then deriving conclusions from them. In contrast, the *Wealth of Nations*, an exemplar of oratorical discourse following the Socratic method, has no interest in expatiating on theoretical issues and is careful in avoiding analysis of those passions shared

by his readers that the author intends to neutralise through cognitive therapy, playing the reader's self-interest against his even more dangerous passions.

The passions include unsocial passions, "hatred and resentment, with all their different modifications" (Smith 1759 I.ii.3.1, p. 34), motions of the mind arising from actual or expected pain and pleasure and then magnified by the imagination. The latter plays a decisive role in the genesis of any passion: it modifies our perception of facts to justify existing passions; in the case of unsocial passions, it lies at the root of self-deception, a ubiquitous mechanism. In the case of unsocial passions, deception unfailingly rules since individuals are always pursuing delusory goods. This class of passions encourages the love of domineering, insatiable desire for acquisition, envy and jealousy, bigotry and hate for other ethnic and religious groups. This class prevails where institutions and laws encourage it, education is lacking, scarcity of social life generates a splenetic mood, and the clergy and merchants manipulate the mob

b. *Self-interest*. In the modernised cliché, self-interest is the basis of the (allegedly Smithian) invisible hand axiom, according to which individuals always act to promote their interests by calculating means rationally and their actions spontaneously harmonise to maximise collective utility.

Nevertheless, interest plays a more limited role in the real Adam Smith. Firstly, interest is not tantamount to self-love or vanity. Self-love is not necessarily a vicious passion. Different moralities have tried "one, to increase our sensibility to the interest of others; another, to diminish that to our own" (III.3.8, pp. 139). The American Indian's self-love is still uncorrupted by the mirroring of oneself in the gaze of others. It is "innocent" self-love. The savage excels in the virtues of self-command, summed up in Nature's precept to moderate self-love. The civilised man's virtue is summarised in Christianity's precept to love others as we love ourselves, fostering the virtues of humanity. He can cultivate these virtues because of more frequent opportunities to practice sympathy, that is, the exchange of situations. In the savage, self-love remains uncultivated, linked to "real" needs. In the civilised man, it becomes a prisoner of the imagination, which prompts both the virtues of humanity and the vice of vanity (Cremaschi 2017b). The crucial point is that both the civilised man's virtues and his vices depend on the sympathetic mechanisms developed by civilisation. Domesticated self-love becomes self-interest, that is, self-love regulated by prudence, a calm passion different from unruly selfish passions. Self-Interest, then, is not "rational". Indeed, it is highly irrational, moulded by imagination and sympathy. It has a counterweight in the sense of justice that prevents us from defrauding our neighbours. It may foster cooperation between individuals since they, unlike animals, are naturally inclined to exchange, a propensity dictated by a distinct principle, a fondness for persuading. Self-interest is a necessary basis for coexistence in a society where social relations are not of personal subordination, and we do not need to rely on other people's benevolence but may appeal to a more reliable resource: their self-interest (Smith 1776 I.ii.2, p. 27). Note that this description of the workings of self-interest hardly points to a society of rationally self-interested individuals. We may assume the *buyer* to be prudent, just and even benevolent, but we may hardly assume the *seller* to be any more than prudent and, at most, just. Besides, society's communicative linguistic and sympathetic basis is still there even in the interaction of buyer and seller. Smith reconstructs the emergence through sympathetic mechanisms of, so to say, "shared selfishness". In Hegel's interpretation, "the ability to determine one's own action from the point of view of others is not simply a natural disposition [...] but the product of education and culture, in civilised society it is constructed to function as 'second nature'" (Nuzzo 2010, pp. 49-50; cf. Herzog 2013, pp. 61-83).

c. *the desire of bettering our condition*. This desire is a calm passion that "accompanies us from the cradle to the grave", not an "original quality" but just a "universal phenomenon" corroborated by observations that we may safely take as an explanatory principle. It is possible to single out deeper causes for this desire. Human beings do not seek material goods just because they want pleasure. We see distant objects bigger than they are: as "the distance increases, our judgments become more and more uncertain; and at a very great distance, such as that of the fixed stars, it becomes altogether uncertain" (Smith 1795b 58, p. 155). This uncertainty does not concern just sight but affects imagination as well. Thus, we imagine the happiness carried by wealth and station to be greater than it is (Smith 1759 I.iii.2.2, pp. 50-51). This desire is often confused with reason since it is calm and constant, yet it is no more than a passion and never ceases to be irrational. It is the moving force of industry and parsimony, which are beneficial to society and a source of unhappiness for the individual who strives for useless possessions. The rich man takes pleasure in other people's admiration, which stems in turn from their imagination's delight in contemplating the perfect correspondence between means and ends exemplified by luxury goods (IV.1.8, pp. 181-183; cf. Bruni 1987, pp. 76-9 and 92-4; Pack 2019, pp. 44-9).

d. *the propensity to truck and barter*. This principle accounts for cooperation in human societies and – Smith assumes – is absent in animal societies (Smith 1776 I.ii.2, p. 26). The *Wealth of Nations* assumes it to be a principle of human nature sufficiently corroborated by experience, though probably not "one of those original principles in human nature,

of which no further account can be given”, but instead “the necessary consequence of the faculties of reason and speech” (I.ii.1, p. 25). The *Lectures on Jurisprudence* suggest that its “real foundation” lies in “that principle to persuade which so much prevails in human nature” (Smith 1978 LJ (B) 221, p. 493; cf. LJ (A) vi.56, p. 352).

e. *the tendency to produce ends that were no part of our intention.* This tendency is the most general principle, almost a meta-principle in whose light we may understand the workings of all others: everybody intends some end but, in many cases, “is led by an invisible hand to promote an end which was no part of his intention” (Smith 1776 IV.ii.9, p. 456). The unduly insulated notion of the invisible hand is a particular instance of this principle which governs all social phenomena. Language arose out of the mutual adaptation of phonemes emitted by savages to coordinate behaviours so as to ensure survival; the division of labour arose out of a tendency to specialise in the skill each found easier to practice; the practice of barter arose from the pleasure of persuading and the institution of money arose from the unintentional simplification of such practice; law and government arose from a tendency to admire the rich and powerful and a propensity to obtain, by offering gifts, their assistance against actual or supposed injustice; systems of morality arose out of the unpleasantness of not having our sentiments echoed by others.

Otteson aptly describes this overall tendency, labelled “the market model”, as the overarching principle of the Smithian system, at work in all large-scale human institutions where “free exchanges among people pursuing their own interests give rise over time to an unintended system of order” (Otteson 2002, p. 171).

8. Analysis: physical-moral metaphors

Besides a few principles of human nature, principles put to work in the *Wealth of Nations* include trans-individual mechanisms systematically described in terms of physical analogies (Cremaschi 1984, pp. 91-94; 2002; Fiori 2021, pp. 31-63) but also, less frequently, analogies with biological phenomena (Cremaschi 2002, pp. 94-97; Fiori 2021, pp. 65-86). Smith purposely does what Newton had done, at least according to his reconstruction: resorting to a notion of which we have a daily experience, he accounts for phenomena whose causes seemed mysterious and renders them familiar to our imagination by making the shift smooth from hypothetical causes to observed effects.

a. *The natural price.* It is, as it were, the central price, to which the prices of all commodities are continually *gravitating*. Different accidents may sometimes keep them suspended a good deal above it and sometimes force them down even somewhat below it. But whatever may be the obstacles which hinder them from settling in this *center of repose and continuance*, they are constantly tending towards it (Smith 1776 I.vii.15, p. 75).

The gravitation metaphor is more than an embellishment giving more rhetorical force to Smith’s prose. Instead, it is one of the hinges around which the discourse turns, like several other physical-social metaphors (Cremaschi 2002, p. 93). The submerged part of the metaphor, looming in the word “gravitating”, is a spatial representation of the economy where prices move downward or upward. Not by chance, this notion comes from Newton’s conceptual weaponry. In *Philosophical Enquiries*, gravitation is a phenomenon we experience daily, which Newton transferred from the sublunar sphere to the heavenly sphere. Smith, in turn, renders the natural price familiar to our imagination by describing it in terms of something already familiar due to the popularity of Newton’s “philosophical discoveries”.

b. *The invisible hand.* While discussing foreign and domestic trade, arguing that the latter is more beneficial for the progress of “national opulence”, Smith writes that

every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command [...] and he is [...] led by an invisible hand to promote an end which was no part of his intention (Smith 1776 IV.ii.4-9, p. 456).

Elsewhere he had made precisely the same point without using the phrase about the beneficial effect of the division of labour, which “is not originally the effect of any human wisdom, which foresees and intends the general opulence to which it gives occasion” (I.ii.1, p. 25).

Both passages intend to illustrate how market mechanisms bring about desirable results in investment allocation or labour productivity. Numberless authors quoted the phrase either as an illustration of the harmony-of-interest doctrine or proof of Smith’s “modernity” in “forerunning” general equilibrium theory. The passage claims that human actions bring about the same effect in case the actors intend it, and in case it was not part of their intention (Cremaschi 2017a; Fiori 2021, pp. 135-62). The claim is not a deterministic character of the cause-effect relationship but the equivalence

of final and efficient causes (Cremaschi 2002, pp. 93-4). The passage leaves scarce room for speculations based on the equivalence of the invisible and the supernatural. However, the passage does, *on purpose* and *for rhetorical purposes*, echo a phrase widespread in Calvinist preaching of the time to express sarcasm at merchants who boasted their concern for national wealth and power (Pack 1996, p. 189; Cremaschi 2017a; Fiori 2021, pp. 87-108).

c. *Circulation*. The idea of circulation appears in Book II while discussing the accumulation of stock. It is preceded by a hybrid historical reconstruction, only imperfectly conjectural history, beginning with primitive society and adding subsequent modifications. The story goes as follows: after the division of labour, workers no longer obtain everything they need through their work alone, so they need a fund of goods to be exchanged. Besides, technical improvements bring about expensive machines owned by people different from those who use them. As the worker needs raw materials and goods to survive until he may sell the product of his work, capital goods are necessary to mobilise labour that would otherwise remain potential in an “improved” society. The “progress of opulence” depends accordingly on principles of human nature: “the general disposition to truck, barter, and exchange” (Smith 1776 I.ii.5, p. 30); “parsimony” inspired by the “desire of bettering our condition” (II.iii.14-18, pp. 337-8), which prompts accumulation of reserves; “industry”, or the desire to obtain revenue from the goods we own and cannot use for our consumption (IV.23, p. 453).

At this stage, commercial society is re-described in terms of mechanical metaphors. The primary subject of metaphors is here circular movement. For example, money is the “great wheel of circulation” (II.ii.14, p. 289; II.ii.23, p. 291). In other words, its function is smoothing the shift of other goods from one owner to another. In this passage, “circulation” is the rotating movement of a wheel; in others, it is the flow of a fluid, namely value, through the vessels of a living body (IV.vii.c.43, p. 605; cf. Cremaschi 2002, pp. 94-96; Fiori 2021, pp. 163-80).

In conjectural history, we may assume that the characterisation of traits of human nature introduced as “principles” is based on observation, which does not imply that, say, the propensity to truck and barter is an “original quality” of human nature but just that such observed trait is universal enough. When Smith shifts from history to systems, principles are no more a mere result of observation. They are mechanisms read *into* phenomena or metaphorical redescriptions of phenomena. Their choice depends on their usefulness for unifying disjointed phenomena, which is the function of principles in Smith’s history of astronomy. An already mentioned difference is that, while astronomy cannot go beyond “saving the phenomena”, political economy and ethics treat human behaviour, that is, “the affairs of the very parish we live in” (Smith 1759 VII.ii.4.14, p. 314; cf. Vivenza 2001, pp. 10-13). Thus, the choice of principles is less arbitrary here. Since deception is ubiquitous, the philosopher cannot trust economic actors as reliable informants: the merchant intends only his security or gain but is “led by an invisible hand to promote an end which was no part of his intention” (Smith 1776 IV.ii.9, p. 456). Thus, the tendencies of market prices to gravitate around the natural price and merchants to invest in the domestic economy are “universal phenomena” no less than Newton’s gravitation. We can reduce these phenomena to more basic elements, that is, qualities of human nature, but till our goal is to draw a plausible account of the “progress of opulence”, we may resort to some of them as *explanans* without inquiring into their ultimate nature.

9. Synthesis: historical reconstructions

In the historical reconstructions, “analysis” – the first step of the twofold analytic-synthetic procedure mentioned by Pownall – is taken for granted. Smith starts here with a few characteristics of human nature about which there is broad agreement. Hume had written that if we want to explain the behaviour of the Greeks and Romans – and American Indians, Smith would add – we should study first “the temper and actions of the French and the English: You cannot be much mistaken in transferring most of the observations which you have made with regard to the latter” (Hume 1748-1751 VIII.i.65, p. 83). Thus, history informs us about “constant and universal principles of human nature” (p. 83). Smith had occasionally been more diffuse on such principles in other works – not just the *Moral Sentiments* but also the *Rhetoric Lectures* and the *Lectures on Jurisprudence*. In the *Wealth of Nations*, he introduces these principles as something familiar enough to readers interested more in practice than speculation.

a. *a sample of well documented history: the decline of feudalism*

In the *Wealth of Nations* Book III chapter 4, Smith sets out to reconstruct how the commerce of towns contributed to the country’s improvement. This reconstruction is part of the discussion of the different progress of opulence in different nations, highlighting how there is a “natural progress of opulence”, which must have taken place “in some degree in every society” (Smith 1776 III.i.9, p. 380) but in the history of Europe this “natural order of things” has been almost inverted. Let us take this historical reconstruction of the time when the feudal system began to decline. The sequence of events is as follows:

- i) The feudal order, though implying a limitation of the power of allodial lords, made room for “violence, rapine and disorder” (III.iv.9, p. 418).;
- ii) Feudal lords consumed themselves the whole surplus produce of their lands without sharing with tenants and retainers; principles implied: grief and joy arising from our private good or bad fortune (Smith 1759 I.ii.5.1, p. 40); “men are so selfish that when they have an opportunity of laying out on their own persons what they possess, tho on things of no value, they will never think of giving it to be bestowed on the best purposes by those who stand in need of” (Smith 1978, LJ (A) i.117, p. 50); “All for ourselves, and nothing for other people, seems, in every age of the world, to have been the vile maxim of the masters of mankind” (Smith 1776 III.i.10, p. 418).
- iii) foreign commerce “gradually furnished the great proprietors with something for which they could exchange the whole surplus produce of their lands” (III.i.10, p. 18); and thus, “as soon as the feudal lords could find a method of consuming the whole value of their rents themselves” buying “a pair of diamond buckles, or something “as frivolous and useless”, they did so; principle implied: utility pleases because of the nice correspondence of means and ends, and this is why human beings are fond of “trinkets of frivolous utility” (Smith 1759 IV.I.6, p. 180).
- iv) in this way, the feudal lords lost all the power and authority conferred upon them by maintaining thousands of men; the principle implied is: that human beings tend to sympathise more with the rich and powerful (I.iii.2.1, p. 50).
- v) “When the great proprietors of land spend their rents in maintaining their tenants and retainers, each of them maintains entirely all his own tenants and retainers” (Smith 1776 III.iv.12, p. 420), who become entirely dependent upon the landlord, men who gain their livelihood like dogs, endeavouring to obtain the attention of the rich and powerful “by a servile and fawning attention” (I.ii.2; p. 26); but tenants who are not secure in their possession will be ready to serve their lord to the point of “attending [him] to battle” (Smith 1978, LJ(A) i.118, p. 50); principle implied: civil authority arises from natural deference to the rich (Smith 1759 I.iii.2.3, pp. 52-3; Smith 1978, LJ(A) iv 9-10, p. 203).
- v) since the personal expense of great proprietors had gradually increased, they dismissed the unnecessary part of their tenants (Smith 1776 III.iv.13, p. 420) and tried to raise their rents, to which tenants could agree upon the condition that they “should be secured in their possession, for such a term of years as might give them time to recover with profit whatever they should lay out in the further improvement of the land”; as a result, a tenant under such conditions “will expose neither his life nor his fortune in the service of the proprietor” (III.iv.14, p. 421).
- vi) “the great proprietors were no longer capable of interrupting the regular execution of justice, or of disturbing the peace of the country [and] became as insignificant as any substantial burger of tradesman in a city” (III.iv.15, p. 420).
- vii) the “silent and insensible operation of foreign commerce brought about” the effect of stopping the “violence, rapine and disorder” prevailing under the feudal law (III.iv.10, p. 418) and a “revolution of the greatest importance to publick happiness, was in this manner brought out by two different orders of people, who had nor the least intention to serve the publick”, the great proprietors who wanted “to gratify the most childish vanity” and “the merchant and artificers who acted merely from a view to gratify their own interest” (III.iv.18, p. 422); principles implied: vanity, self-interest, the tendency to produce ends that were no part of our intention.

b. *samples of hybrid use of natural history: the division of labour and the invention of money*

The first two chapters of Book I start with two examples of “historical” discourse somewhere between natural history and idealisation, where the principles given for granted exemplify *some* of Hume’s principles of human nature. It accounts for human society’s evolution by hypothetically reconstructing the *rude ages*, hardly a description of the “age of the hunters” but a sort of ad hoc mix of “age of the hunters” with “commercial society”. Book I offers a historical account of the division of labour and the institution of money in the second and fourth chapters. The division of labour established in improved societies is an unintended result. A propensity to “truck and barter” observed in human beings, whose reduction to original qualities goes beyond the scope of Smith’s discourse, gradually brought about such a practice. The natural diversity of talents, the necessity to ask one’s fellows for help and the opportunity of using their “self-love” in one’s favour prompted those who happened to have any talent to specialise in the activity for which they were gifted. Thus, “the different produces of their respective talents” started being brought “into a common stock, where every man may purchase” what he needs” (I.ii.5, p. 30).

The sequence of events in these two chapters is as follows:

- i) the division of labour is hardly the effect of human wisdom; it is the unforeseen consequence of a “certain propensity of human nature, to truck, barter, and exchange one thing for another”; principle implied: *the tendency to produce ends that were no part our intention*.
- ii) this propensity is not an original principle but probably the consequence of the faculties of reason and speech; in

the already quoted passages from the *Lectures on Jurisprudence*, its “real foundation” is identified with the “principle to persuade”; principle implied: the desire of sympathetic consonance.

iii) an adult man in an improved society – unlike adult animals and Rousseauvian savages – constantly needs help.

iv) in civilised society, he needs the cooperation of multitudes and has no time to gain their friendship; principle implied: the concentric circles of sympathy.

v) even in the case of beggars, charity is never the sole “principle” that provides them with the necessities of life; even beggars obtain most of what they need “by treaty, by barter, by purchase”; principles implied: self-interest is more reliable than benevolence.

vi) it is this “trucking disposition which originally gives rise to the division of labour”: in a tribe of hunters or shepherds, somebody “makes bows and arrows with more readiness and dexterity than any other”; he discovers that “he can get more cattle and venison” by exchange than by catching them himself; the making of bows and arrows becomes a chief business for regard to his interest; principle implied: propensity to truck and barter.

vii) the certainty of being able to exchange all the surplus for parts of the produce of other men’s labour encourages men to cultivate and bring to perfection “whatever talent or genius he may possess”; principle implied: self-interest.

viii) the difference of talents is most of the time “not so much the cause, as the effect of the division of labour”; the propensity to truck and barter both forms that difference of talents and renders it useful; principles implied: uniformity of human nature; propensity to truck and barter.

What is disturbing in Smith’s way of proceeding here is that the society described belongs at first to the age of hunters but suddenly becomes a society where every man is a merchant, a simplified picture of the commercial society. Smith takes a tribe of hunters as a case study and then adds other conditions showing how a market society may develop. Marx made much of this remark, discovering an “ideological” sleight of hand through which Smith projected capitalism onto primitive society or hypostatized the Scotsman in every man. It is as well to admit that Smith is making poor use of his sources: Joseph-François Lafitau (1724) never reported barter between arrows and bows and venison; also, he never suggested the marginality of the female activity in agriculture that Smith takes for granted among American Indians (Cremaschi 2017b). Nonetheless, such biased use of sources is less damaging here than on other occasions: Smith is not making *real* natural history; he is taking an elementary economy as an illustration of the potentialities of the propensity to truck and barter combined with the unintended results principle. His historical and ethnographic sources joined with his piecemeal recourse to principles of human nature would have been enough to make him aware of the ubiquitous character of the propensity to persuade. However, he should also have been aware that the derived propensity to truck and barter needs a context to develop and that other propensities would prevail among hunters, leaving only superfluous goods, say, shells, beads and scalps, for truck and barter.

10. Synthesis: systems

The two-step procedure is apparent when Smith constructs a “system”. He first singles out some unintended results we may observe in ordinary circumstances or find in historical sources and then reconstructs the genesis of observed or documented phenomena by a chain of connecting principles, as a rule, independent of the actors’ intentions. Smith argued that theories or systems are “imaginary machines” constructed by transposing phenomena from another more familiar field to the domain under study, thus filling apparent gaps in the succession of phenomena (Smith 1795a Astronomy II.9, pp. 42-3; IV.19, p. 66). Schliesser (2017, pp. 288–313) addressed the issue of the kind of *methodology* – the present writer would rather say *method* – put at work in the *Wealth of Nations*. A valuable contribution he gives is a discussion of the role of Newton’s fourth rule in steering his theoretical practice (pp. 301-302). Newton’s fourth rule prescribes that

in experimental philosophy we are to look upon propositions inferred by general induction from phenomena as accurately or very nearly true, notwithstanding any contrary hypotheses that may be imagined, till such time as other phenomena occur, by which they may either be made more accurate, or liable to exceptions (Newton 1726, vol. 2, p. 555).

Smith’s discussion of Descartes and Newton in *Philosophical Enquiries* identifies the Cartesian vice with bending phenomena to fit already formulated theories instead of accepting the possibility of constant correction to fit newly discovered phenomena (Smith 1795a Astronomy, iv.66-7; pp. 97-9). The implication is that the Cartesian way of proceeding lacks “a feedback mechanism to allow empirical failures to improve one’s theory” (Schliesser 2017, p. 301; cf. Cremaschi 2000, p. 76).

10.1. A sample of system: the natural price

Smith writes that “the market price will *rise* more or less above the natural price” or “*sink* more or less below” it (Smith 1776 I.vii.9, pp. 73-74). Elsewhere, he talks of “the *fall* of profit” in some trade and “the *rise* of it in all others” (IV.vii.c.88, p. 630, emphasis added) that immediately dispose investors to alter their allocation of investment.

The idea of *gravitation* describes variations in certain magnitudes that oscillate *as if* there was a centre with an attractive force. Gravitation is just a result of competition among sellers, which is, in turn, the effect of the action of individual self-interest – a principle of human nature – combined with the unintended-results principle – a principle of human action, sometimes improperly called invisible hand.

Smith remarks that if, on the one hand, the “real price” of commodities consists of labour embodied, on the other hand, magnitudes of exchange are not measured by the invariable measuring rod of labour but by the fluctuating measuring rod of money, and we limit ourselves to coming *roughly* near the “real price” by bargaining. The notion of gravitation of prices around the natural price acquires importance in connection with the idea of natural price. At any given time, the market price is the price paid for a commodity. The ordinary or natural price is the average from which market prices are never too far. We may establish the natural price only by calculating the average market price.

The mechanism is not introduced only to account for temporary variations in the rates of wages and profits but has a more basic function. The ordinary rate of profits is dependent partly on the “general circumstances of society” and partly on the peculiar character of a particular use of labour and capital. The mutual dependence of the natural price and the general situation of society manifests itself at a phenomenal level in terms of prices fluctuating as an effect of forces acting in the market. Thus, Smith believes he can obtain a proxy for the *real* price – a non-observable magnitude – provided by the ordinary price, an observable magnitude.

It is worth noting that the *natural price*, no less than the entities introduced by “philosophers” in the course of the history of astronomy, is one link in an “invisible chain” or a piece of an “imaginary machine”. The difference with natural philosophy is that the *principles of human nature* called into play here enjoy a firmer warrant than gravitation in astronomy since human nature is closer to our experience than celestial bodies. This consideration does not apply yet to the notion of natural price. The natural price is an imaginary entity like the entities of natural philosophy. One blunder in Schliesser’s account is downplaying the Newtonian character of the gravitation metaphor. Despite his opinion that Smith’s epistemology is “modest realism”, he admits that the natural price is “a kind of useful fiction” (p. 299). However, he adds that the comparison with Newtonian gravitation is misleading: the latter is “universal, mutual, simultaneous” while Smith’s natural price “is not also gravitating toward the market price – that is, the gravitation is not mutual”, and thus his statement is closer to his description of Aristotelian “gravity”, because of which “matter gravitates toward its natural place” (p. 299). The word “gravity” had been used by Smith but does not correspond to Aristotle’s terminology. No “gravitation” exists in Aristotle, who talks just of a *natural tendency* towards a position, either upwards or downwards, which constitutes the essence of *lightness* and *heaviness*. Market prices are pushed upward or downward by other real-world entities, not by the natural price, which is a *point or a line* in space describing roughly the position toward which a body tends to return, not a celestial *body* that could exert some kind of action on other bodies.

10.2. Synthesis: the construction of a non-Cartesian system

Following Pownall, we might read Book IV as the synthesis prepared by the analysis conducted in Books I-III. Not unlike systems of moral philosophy (Smith 1759 VII.ii.i.11, p. 270), the systems of political economy criticised in Book IV contain a grain of truth that Smith is ready to acknowledge (Smith 1776 IV.viii.48, p. 660; IV.ix.4, p. 664; IV.ix.24, p. 671). He concludes that, after the refutation of such artificial systems, one “system” is left: a refusal of any system. Smith’s solution is not a different “political economy” but the refusal of any “political economy” when understood in one sense, the management of a nation’s resources as if the nation were a household. The alternative is “the obvious and simple system of natural liberty” (IV.ix.51, p. 687; ix.48, p. 686), that is, “of perfect justice, of perfect liberty, and of perfect equality” (IV.ix.17, p. 669; cf. IV.ix.3, p. 664; IV.vii.44, p. 606).

Note that Smith contrasts this solution with the mercantile and the agriculture systems in such a way as to imply that they are “systems” in a different sense. While the former are theories about the nature of wealth from which policies derive, this is a “simple and obvious” system carrying no rigid directive and rejecting any discovery of the essence of wealth, reducing it to what is obviously under our eyes: *that state* in which people easily obtain goods. In other words, the system of natural freedom is “simple and obvious” because it is not a “system” in the same sense as the Cartesian theory of vortices.

Note that the connotation of the word system is ambivalent here as it is in *Philosophical Enquiries*, where systems were “imaginary machines” that would create the impression of making us see connections between the phenomena of nature. Smith recognised that such imaginary machines are indispensable because our minds cannot function in any

other way but argued that they are misleading when they bend phenomena to suit theories instead of adapting theories to phenomena (Smith 1795a Astronomy ii.9, pp. 42-3; iv.19, pp. 66-7).

The justification of the system of natural liberty depends on considerations about the nature of wealth. However, these are critical or negative considerations. They explain the paradox of the commercial society, the coexistence of high wages and low prices. The system does not carry social engineering but limits itself to a legal framework. Establishing justice, freedom, and equality brings the conditions for the progress of opulence. This progress occurs through the unintended emergence of order (within a legal framework). It also carries a not-too-unfair distribution among the three classes of society – landowners, cultivators and artificers – with a welcome spill over effect on the labouring poor, the most deserving part of the second and third class (Smith 1776 I.viii.36, p. 96).

11. The Socratic and the Newtonian “methods” and the Cartesian love of system

There is a combination in the *Wealth of Nations* of deliberative eloquence, historical writing and didactic writing following the “Newtonian method”. The work starts with a paradox, how the meanest labourer, notwithstanding all the oppressive inequality mentioned in the *Early Draft* (Smith 1937, p. 475) but withheld here, is better fed and clothed than the king of the savages. Then, through a “seamless flow” (Pack 1995, p. 197), it leads the reader to the paradox’s solution. The conclusion is that the prosperity of the commercial society is the unintended result of human propensities interacting within a framework of legal provisions and moral virtues. Such prosperity will grow once a more generous reward of labour becomes the rule. The “winding route” followed by the *Wealth of Nations*

proceeds from a general view about how human beings ‘naturally’ increase their production of goods (parts I and II) to an explanation of why European history has not followed this natural course (part III), a diagnosis and refutation of other views about how production works (part IV) (Fleischacker 2004, p. 11).

Only after he has dismantled the opposing views does Smith announce that the system of natural liberty establishes itself. In a word, “a view is set up, obstacles to that view are surveyed and overcome, and the original view returns of its own accord” (p. 11). Fleischacker believes that the method “recalls that of Aristotle” since the way of arguing for Smith’s “own view consists in taking up and responding to objections” (11). We may admit that so much is true for the historical Aristotle, as he capitalised on the Socratic lesson, perhaps less so for Adam Smith’s Aristotle.

We mentioned that the *Wealth of Nations* is both a Socratic dialogue and a scientific treatise. Though Smith had commented in the *Rhetorick Lectures* that the didactical method is hardly ever applicable to deliberative eloquence, he felt it necessary to contravene his recommendations. The work is not just *one part* of his projected “History and Theory of Law and Government” but a *partial* implementation of that project, an intervention in public discourse conducted at the time by anonymous tracts. It was a Gargantuan tract. The Socratic side of the work consists of objections and refutations, taking care to incorporate the grain of truth from opponents. The Newtonian side makes room for “systems”, where we lay down one or a very few principles by which we connect phenomena. He had declared that “to account for all appearances from as few principles as possible” is “a property natural to all men but which philosophers in particular are apt to cultivate with a peculiar fondness” (Smith 1759 VII.ii.2.14; p. 229) and, unsurprisingly, he found it convenient to put this ability to work when engaging in persuasion.

The conclusion is that, in the author’s intentions, the part of the projected History and Theory dealing with “police” was still natural jurisprudence, not economics. Natural jurisprudence was the medieval natural law doctrine made more empirical and historical. Smith’s actual performance was instead a report on British commercial policies. The phrase “political economy” shows up only three times in the work, denoting alternatively a set of policies and legal provisions concerning commerce or a body of knowledge necessary to the legislator.

In bold phrasing, Smith was advocating economic *anti-theory*. As Lindgren (1973, p. 18) already realised, the climax of Smith’s analytic-synthetic procedure is precisely the dismantling of both dominating theories of the time to leave room for a “simple and obvious” system whose principles are but “common sense”. Malthus and Ricardo – different as they were – were both Adam Smith’s children, and all twentieth-century economists were his grand-nephews, both the neo-classical who believed it fruitful to reconstruct Smithian theory using post-marginalist tools and institutionalists who emphasised historical reconstructions. The suspicion is not out of place that the most genuine family legacy is a suspicious attitude towards theory, the legacy of the Enlightenment aversion to *esprit de système*. Keynes proved to be as legitimate a descendant as any other when he depicted political economy as “a method rather than a doctrine, an apparatus of the mind, a technique of thinking which helps the possessor to draw correct conclusions” (Keynes 1922, p. 856; cf. Carabelli & Cedrini 2015)

12. The *Wealth of Nations* as moral discourse

A final remark that would deserve more extended treatment elsewhere is about the alleged demoralisation of economic discourse. Vivienne Brown argued that *Wealth of Nations* “operates as a non-moral or amoral discourse in that its arguments and assumptions do not require that economic agents function as moral agents” because justice, indeed evoked, “is not a truly moral virtue in the dialogic sense, but a lower-order virtue” (Brown 1994, p. 162). To this, we might object that not only justice but also benevolence arise from the same source as the propensity to truck and barter, the principle from which the market and money derive, “reason and speech”, Cicero’s *ratio et oratio* (Vivenza 2001, p. 204).

The absence of ethical concerns is allegedly in tone with the work’s “monological style”. However, surprisingly, Brown admits that the work “as a whole is an example of rhetorical discourse” that “achieves conviction / persuasion [...] by a number of means depending on the circumstances and the readership” (p. 162). We might suggest that precisely this admission also accounts for the moral dimension of the work, thus turning Brown’s conclusions upside down. Smith indulges in vehement remarks on the “folly and injustice of the masters of mankind” (Smith 1776 III.iv.10, p. 418) when talking of the Spanish *conquistadores* – a class he could safely accuse of every kind of infamy. However, he omits mentioning here the “oppressive inequality” he had noted in British society (Smith 1937, p. 564). A reason is that the readership included the beneficiaries of such inequality (Cremaschi 1984, pp. 163-5), a reason to leave out “discussions that he thought might irritate or lose the interest of the merchants, aristocrats, and politicians whom he hoped would read the book” (Fleischacker 2004, p. 14). On the condition of the working classes, he expresses himself in a matter-of-fact tone, enouncing “a frank admission of what is simply an evident fact” (Apromourgos 2009, p. 211). However, the whole thread of Socratic persuasion leads step-by-step to the unavoidable conclusion that it is in the genuine interest of the well-offs that also those who feed and clothe the whole society be well-fed and well-clothed.

12. Conclusions: the coexistence of “Socratic method”, “Newtonian method” and moral discourse

1. If we read the *Wealth of Nations* in Adam Smith’s terms, it turns out to be at once *eloquence*, an intervention in a controversy on British commercial policies, *history*, a step-by-step reconstruction of causes and effects, and *system*, the application of “experimental philosophy” to moral and political subjects; the unity of Smithian oeuvre denied by Brown (1994, p. 154) is as alive as ever; Smith’s ethics, jurisprudence, and economics were marked “by an attempt to delineate the boundaries of a single system of thought, of which these separate objects were the component parts” (Campbell and Skinner 1976, p. 4);

2. The *Wealth of Nations* is *more* than a partial implementation of the project of the “History and Theory of law and government”; it is the report of a one-man self-appointed Royal Commission investigating British commercial policies; in drafting the report, Smith consistently adopted one rhetorical strategy, the Socratic method;

3. The *Wealth of Nations* is not primarily “didactic discourse” but Socratic “deliberative eloquence” forcing the reader to follow a step-by-step path to undesired conclusions; this hardly detracts from the validity of Pownall’s assumption that Smith was following the Newtonian *regulae philosophandi*; it just limits its validity to those parts where he was conducting a didactical task showing the connectedness of apparently disjointed phenomena.

4. within such a strategy, distinct argumentative passages are entrusted to historical reconstructions, either “well documented” or “conjectural”, and to theories or “systems”;

5. the “experimental” character of systems marks the difference between *Wealth of Nations* and those “systems” Smith attacks; the work is less than a “system” like those it attacks, although it has recourse to both historical reconstruction and experimental philosophy;

6. far from “monological”, the *Wealth of Nations* is “dialogical”, though the dialogue is not always as friendly as in *Moral Sentiments* and resorts to irony and sarcasm when attacking mistaken systems and to invective when unmasking abominations yielded by the love of domineering and the desire to appropriate what belongs to others; and the Newtonian connection of the discordant appearances of phenomena in a simple and connected way is at once a cognitive enterprise and a rhetorical move in a controversialist attack to the mercantile system, a scientifically inconsistent doctrine;

7. justice is not a “lower-order virtue”; prudence, justice and benevolence arise from the same source as the propensity to truck and barter, and even buying and selling take place within a minimal linguistic and sympathetic framework.

References

Aspromourgos, Tony. 2009. *The Science of Wealth. Adam Smith and the framing of political economy*, London: Routledge.

- Bevilacqua, Vincent. 1965. "Adam Smith's Lectures on Rhetoric and Belles Lettres". *Studies in Scottish Literature*, 3(1), pp. 41-60.
- Bevilacqua, Vincent. 1968. "Adam Smith and some philosophical origins of eighteenth-century rhetorical theory", *Modern Language Review*, 63(3), pp. 559-568. doi:10.2307/3722195.
- Bittermann, Henry J. 1940. "Adam Smith's empiricism and the law of nature", *Journal of Political Economy* 48(4/5), pp. 487-520, 703-734.
- Brown, Vivienne. 1994. *Adam Smith's discourse. Canonicity. Commerce and Conscience*. London and New York: Routledge.
- Brown, Vivienne. 2016. "The Lectures on Rhetoric and Belles Lettres", in R.P. Hanley (ed.), *Adam Smith: His Life. Thought, and Legacy*. Princeton: Princeton University Press, pp. 48–66.
- Bruni, Filippo. 1987. "La nozione di lavoro in Adam Smith", *Rivista di Filosofia Neoscolastica*, 79(1), pp. 67-95.
- Burnyeat, Myles F. 1984. "The sceptic in his place and time". In R. Rorty, J.B. Schneewind & Q. Skinner (eds), *Philosophy in History*, Cambridge: Cambridge University Press, pp. 225-254. doi:10.1017/CBO9780511625534.013
- Campbell, Roy H. & Skinner, Andrew S. 1976. "General Introduction", in A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*. Oxford: Oxford University Press, pp. 1-66.
- Carabelli, Anna M. & Cedrini, Mario 2015. "From Theory to Policy? Keynes distinction between apparatus of thought and apparatus of action. with an eye to the European debt crisis", *Challenge*, 58(6), pp. 509-31. doi: 10.1080/05775132.2015.1105666.
- Cremaschi, Sergio. 1984. *Il sistema della ricchezza. Economia politica e problema del metodo in Adam Smith*. Milan: Angeli.
- Cremaschi, Sergio. 1989. "Adam Smith. Sceptical Newtonianism, Disenchanted Republicanism, and the Birth of Social Science", in M. Dascal, O. Gruengard (eds), *Knowledge and Politics: Case Studies on the Relationship between Epistemology and Political Philosophy*, Boulder, Co: Westview Press, pp. 83-110.
- Cremaschi, Sergio. 2000. "Les Lumières Écossaises et le roman philosophique de Descartes", in Y. Senderowicz & Y. Wahl (eds.). *Descartes. Reception and Disenchantment*. Tel Aviv: University Publishing Projects, pp. 65-88.
- Cremaschi, Sergio. 2009. "Newtonian physics, experimental moral philosophy, and the shaping of political economy", in R. Arena, Sh. Dow & M. Klaes (eds), *Open Economics. Economics in Relation to Other Disciplines*. Oxford: Routledge, pp. 73-94.
- Cremaschi, Sergio. 2017a. "Adam Smith's irony and the invisible hand", *Iberian Journal of the History of Economic Thought*, 4(1), pp. 43-62. doi:10.5209/IJHE.56515
- Cremaschi, Sergio. 2017b. "Adam Smith on savages", *Revue de philosophie économique*, 18(1), pp. 13-36. doi:10.3917/rpec.181.0013.
- Cremaschi, Sergio. 2002. "Metaphors in The Wealth of Nations", in S. Boehm, Ch. Gierke, H. Kurz & R. Sturm (eds). *Is There Progress in Economics?* Cheltenham: Edward Elgar, pp. 89-114.
- Endres, Anthony M. 1991. "Adam Smith's Rhetoric of Economics: An Illustration Using 'Smithian' Compositional Rules", *Scottish Journal of Political Economy*, 38(1), pp. 76-95. doi:10.1111/j.1467-9485.1991.tb00302.x
- Fiori, Stefano. 2021. *Machines. Bodies and Invisible Hands: Metaphors of Order and Economic Theory in Adam Smith*. Cham: Palgrave Macmillan. doi:10.1007/978-3-030-85206-1
- Fleischacker, Samuel. 2004. *On Adam Smith's Wealth of Nations. A Philosophical Companion*. Princeton: Princeton University Press.
- Forbes, Duncan. 1975. "Sceptical Whiggism, Commerce and Liberty", in A. Skinner & Th. Wilson (eds), *Essays on Adam Smith*, Oxford: Clarendon Press, pp. 179-201.
- Geach, Peter, 1956. "Good and Evil". *Analysis*, 17(2), pp. 33-42.
- Griswold, Charles L. Jr. 1999. *Adam Smith and the Virtues of Enlightenment*. Cambridge: Cambridge University Press.
- Herzog, Lisa. 2013. *Inventing the Market: Smith, Hegel, and Political Theory*. Oxford University Press. doi:10.1017/S1053837215000152
- Hume, David. 1748-1751. *Enquiries concerning Human Understanding and concerning the Principles of Morals*, ed. by P. H. Nidditch. Oxford: Oxford University Press, 1975,
- Keynes, John M. 1922. "Introduction to the Series Cambridge Economic Handbook", in *Economic Articles and Correspondence*, vol. 2, ed. by D. Moggridge. The Collected Writings of John Maynard Keynes 12, London: Cambridge University Press for the Royal Economic Society, pp. 856-857.
- Lafitau, Joseph-François. 1724. *Moeurs des Sauvages Américains. comparées aux mœurs des premiers Temps*. Paris: Maspéro. 1982 (Engl. transl. *Customs of the American Indians compared with the customs of the primitive times*, ed. by W.N. Fenton & E.L. Moore. Toronto: Champlain Society. 1974-1977).
- Lindgren, John R. 1973. *The Social Philosophy of Adam Smith*. The Hague: Nijhoff.

- López Lloret, J. 2019. “El fundamento lingüístico del pensamiento de Adam Smith”. *Revista Empresa y Humanismo*, 22(1), 71-100. doi:10.15581/015.XXII.1.71-100
- López Lloret, Jorge. 2021a. Introducción, in A. Smith, *Lecciones sobre retórica*. Oviedo: KRK Ediciones, pp. 13-71.
- López Lloret, Jorge. J. 2021b. “El proto-evolucionismo ilustrado de la teoría del lenguaje de Adam Smith”. *Daimon. Revista Internacional de Filosofía*, 33(83), 105-121. doi:10.6018/daimon.368931
- McCloskey, D. 1985. *The Rhetoric of Economics*. Madison: University of Wisconsin Press.
- McKenna, Stephen J. 2008. *Adam Smith: The Rhetoric of Propriety*. London: Palgrave Macmillan.
- Newton, Isaac. 1726. *Philosophiæ Naturalis Principia Mathematica*, ed. by A. Koyré & I.B. Cohen. Cambridge, MASS: Harvard University Press, 1972.
- Norton, David F. 1993. “An introduction to Hume’s thought”, in D. F. Norton (ed.), *The Cambridge Companion to Hume*. Cambridge: Cambridge University Press, pp. 1-32. doi:10.1017/CCOL0521382734.001
- Nuzzo, Angelica. 2010. “The standpoint of morality”, *The Adam Smith Review*, 5, 3 pp. 7-55.
- Ortmann, Andreas & Walvaerens, Benoît. 2022. *Adam Smith’s System. A Re-Interpretation Inspired by Smith’s Lectures on Rhetoric, Game Theory, and Conjectural History*. Cham: Palgrave. doi:10.1007/978-3-030-99704-5.
- Otteson, James R. 2002. *Adam Smith’s Marketplace of Life*. Cambridge: Cambridge University Press.
- Pack, Spencer J. 1991. *Capitalism as a Moral System: Adam Smith’s Critique of the Free Market Economy*. Cheltenham: Edward Elgar. doi:10.1017/CBO9780511610196
- Pack, Spencer J. 1995. “Theological (and hence economic) implications of A. Smith’s *The Principles which lead and direct Philosophical Enquiries*”, *History of Political Economy*, 27(2), pp. 289-307. doi:10.1215/00182702-27-2-289
- Pack, Spencer J. 1996. “Adam Smith’s invisible/visible hand/chain/chaos”, in L.S. Moss (ed.), *Perspectives on the History of Economic Thought: Selected Papers from the History of Economics Society Conference, 1994*, pp. 181-195.
- Pack, Spencer J. 2019. “Rousseau’s Influence on Smith’s Theory of Unintended Consequences. The Invisible Hand and Smith’s Understanding of History”, *The Adam Smith Review*, 11, pp. 36-52.
- Popkin, Richard H. 2003. *The History of Scepticism: From Savonarola to Bayle*. New York: Oxford University Press.
- Pownall, Robert. 1776. “A Letter from Governor Pownall”, in *The Correspondence of Adam Smith*. ed. by E. C. Mossner & I.S. Ross. Second edn. Oxford: Clarendon Press, 1997, pp. 447-484.
- Schliesser, Eric. 2017. *Adam Smith: Systematic Philosopher and Public Thinker*. Oxford: Oxford University Press. doi:10.1093/oso/9780190690120.001.0001
- Sebastiani, Silvia. 2008. *I limiti del progresso. Razza e genere nell’Illuminismo scozzese*. Il Mulino. Bologna (Engl. transl. 2013. *The Scottish Enlightenment: Race, Gender, and the Limits of Progress* Palgrave Studies in Cultural and Intellectual History. Cham: Palgrave).
- Skinner, Andrew. 1983. “Adam Smith: rhetoric and the communication of ideas”, in A.W. Coats. (ed.), *Methodological Controversy in Economics*. London: JAI Press, pp. 71-88.
- Smith, Adam. 1756. “Letter to the Edinburgh Review”, in *Essays on Philosophical Subjects*, ed. by W.P.D. Wightman, J.C. Bryce & I.S. Ross. Oxford: Oxford University Press, 1980, pp. 250-256.
- Smith, Adam. 1759. *The Theory of Moral Sentiments*, ed. by A.L. Macfie & D.D. Raphael. Oxford: Clarendon Press, 1976.
- Smith, Adam. 1767. “Consideration concerning the first formation of languages”, in *Lectures on Rhetoric and Belles Lettres*, ed. by J.C. Bryce. Oxford: Clarendon Press, 1983, pp. 202-226.
- Smith, Adam. 1776. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 2 vols, ed. by R.H. Campbell, A.S. Skinner & W.B. Todd. Oxford: Clarendon Press, 1976
- Smith, Adam. 1795a. “The principles which lead and direct philosophical enquires”, in *Essays on Philosophical Subjects*, ed. by W.P.D. Wightman, J.C. Bryce & I.S. Ross. Oxford: Clarendon Press, 1980, pp. 31-105.
- Smith, Adam. 1795b, “Of the External Senses”, in *Essays on Philosophical Subjects*, ed. by W.P.D. Wightman, J.C. Bryce & I.S. Ross. Oxford: Oxford University Press, 1980, pp. 135-170.
- Smith, Adam. 1937. “Early Draft of part of *The Wealth of Nations*”, in *Lectures on Jurisprudence*, ed. by R.L. Meek, D.D. Raphael & P.G. Stein, Oxford: Clarendon Press, pp. 562-580.
- Smith, Adam. 1963. *Lectures on Rhetoric and Belles Lettres*, ed. by J.C. Bryce. Oxford: Clarendon Press, 1983.
- Smith, Adam. 1978. *Lectures on Jurisprudence*, ed. by R.L. Meek. D.D. Raphael & P.G. Stein. Oxford: Clarendon Press.
- Smith, Adam. 1997. *The Correspondence of Adam Smith*, ed. by E. C. Mossner & I.S. Ross. Second edn. Oxford: Clarendon Press.
- Stewart, Dugald. 1794. “An Account of the Life and Writings of Adam Smith”, in *Essays on Philosophical Subjects*, ed. by W.P.D. Wightman, J.C. Bryce & I.S. Ross. Oxford: Clarendon Press, 1980, pp. 269-332.

Talmor, Ezra. 1980. *Descartes and Hume*. Oxford: Pergamon Press.

Trincado Aznar, Estrella. 2019. *The Birth of Economic Rhetoric: Communication, Arts and Economic Stimulus in David Hume and Adam Smith*. Cham: Palgrave Macmillan. doi:10.1007/978-3-030-14306-0

Vivenza, Gloria. 2001. *Adam Smith and the Classics. The Classical Heritage in Adam Smith's Thought*. Oxford: Oxford University Press.

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