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DECOMMODIFYING WEALTH: LAUDERDALE AND ECOLOGICAL ECONOMICS BEYOND THE LAUDERDALE PARADOX

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Abstract

The term “Lauderdale paradox” has been used by ecological economists since the late 1980s. It refers to the idea, developed by the Earl of Lauderdale in 1804, according to which private riches – the sum-total of the exchangeable value of goods – and public wealth – the sum-total of the use value of goods – vary in opposite directions. The Lauderdale paradox has been used in ecological economics in relation to the valuation of ecosystem services, and also in connection to some branches of political ecology, especially eco-Marxism. Based on a careful reading of Lauderdale’s work, taking into account his political context, this article shows that some of the recent interpretations of the Lauderdale paradox, especially regarding wealth indicators, deserve to be qualified in the light of the original meaning of Lauderdale’s words. Other aspects of Lauderdale’s reflections that could be sources of inspiration for today’s research programs in ecological economics are also emphasized: the extension of environmental accounting to human capital, the study of commodification and decommodification processes in a comprehensive anthropological perspective, and the specification of the characteristics of a steady-state economy.

Keywords: commodification, environmental accounting, steady state, public good, commons, contrived scarcity, history of economic thought

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1. Introduction

References to the Lauderdale paradox have emerged in the field of ecological economics during the last three decades. In their book *For the Common Good*, Herman E. Daly and John B. Cobb Jr (1989) invited early ecological economists to pay attention to the concept. Daly (1998) used it in the midst of the debate on the valuation of ecosystem services that followed the work of Costanza et al. (1997). At that moment, Daly wanted to warn against the idea according to which we would get richer as free goods, with no exchange value, were transformed into scarce goods, valued in monetary terms. To reach this purpose, he summoned James Maitland, 8th earl of Lauderdale – usually called Lauderdale – who published *An Inquiry into the Nature and Origin of Public Wealth* in 1804. In his essay, Lauderdale made a famous distinction between public wealth, which “consists of all that man desires, as useful or delightful to him” (Lauderdale, 1804, p. 56) regardless of any market value, and private riches: “all that man desires as useful or delightful to him; which exists in a degree of scarcity” (p. 57) and, according to Lauderdale, usually have a market price. Lauderdale sought to demonstrate that “private riches and public wealth can hardly ever increase in similar proportions” (p. 107), and in most cases vary in opposite directions, i.e. the development of the market sphere tends to result in a decline in what really matters in life.

In some branches of political ecology, such as eco-Marxism, the Lauderdale paradox reached some success as well. John Bellamy Foster and Brett Clark dedicated some of their reflections to Lauderdale’s paradox of wealth, which illuminates “the ecological contradictions of the prevailing economic ideology” (Foster and Clark, 2009, p. 2; Foster et al., 2010, p. 72). More recently, Jason Hickel (2019, 2020) also leaned on the Lauderdale paradox, in order to associate degrowth with abundance instead of austerity. Traces of it can also be found in the literature at the intersection of political economy and commons issues (e.g. Longo et al., 2015; Standing, 2019, 2022).

All these references to the Lauderdale paradox in ecological economics and political ecology are related to the case of free environmental

goods turned into merchandise. When he tried to illustrate the inverse relationship between public wealth and private riches, Lauderdale himself used the example of the privatization of freely accessible streams of water. That is why both Daly (1998) and Foster and Clark present “the return of the Lauderdale paradox,” which would be “even more significant than it was when originally framed,” while “water scarcities, air pollution, world hunger, growing fuel shortages, and the warming of the earth are now dominant global realities” (Foster and Clark, 2009, p. 13). It could be true that Lauderdale’s paradox appears more relevant today, “in our full world” (Daly, 1998, p. 22; Victor, 2021), than it was in the early nineteenth century. Something would be lost, however, in considering Lauderdale’s reasoning as a “vexing theoretical anomaly” (Daly, 1998, p. 22), which became concrete and important in the present circumstances. Lauderdale was first and foremost a politician, and his reflections did not come from some abstract experiment, but from the political context in which he was acting, as well as the intellectual background in which he was raised. Looking upon Lauderdale’s work as a whole shows that his developments on public wealth as opposed to private riches were the cornerstone of a larger critique of the mercantile system, the relationships it implies between government and private companies, and its disastrous social, political and economic consequences. This overall critique was shared by many political economists of the late eighteenth century, particularly strong among Scottish authors like David Hume and Adam Smith.

On the basis of a detailed historical inquiry, the objectives of this article are, first, to qualify some of the recent interpretations of the Lauderdale paradox in the light of the original meaning of Lauderdale’s words and, second, to identify in Lauderdale’s work further sources of inspiration for today’s research programs in ecological economics.

Lauderdale’s definition of public wealth is notably to be related to recent debates on environmental accounting, i.e. environmentally corrected systems of accounts (section 4). It is also related to a more general inquiry upon the causes and consequences of commodification (section 5). The ultimate consequences of the confusion

between private riches and public wealth were the financial and industrial mechanisms that led to overaccumulate capital and drive production away from people's demands. In this regard, Lauderdale advocated for a steadier perspective of growth and a slower conversion to industry than most of the classical economists, but he also differed significantly from Thomas R. Malthus' lines of reasoning (section 6). To examine these issues, Lauderdale's reflections on wealth will be presented in greater detail (section 2), as well as a brief genealogy of the Lauderdale paradox, up to its appearance in ecological economics (section 3).

2. Lauderdale's reflections on wealth in their context

In his *Inquiry*, Lauderdale begins by regretting the common confusion between money and wealth, and the popular idea that the sum of riches, or private fortunes, are equivalent to wealth, or public opulence. This confusion has led to evaluate public wealth – everything that is valuable to man – in monetary terms, whereas monetary value could only be conferred to private riches – everything that is valuable to man and exists in scarcity.¹ In the two first chapters of his book, Lauderdale tries, on the contrary, to show the disconnection between private riches and public wealth.

In the opening of his demonstration, Lauderdale (1804, pp. 44–45) uses the example of a freely accessible environmental good: streams of pure water. The scarcity of water would inevitably diminish public wealth, as sure as it will increase the sum of private riches. All the references to Lauderdale in ecological economics and political ecology come from this passage, as an illustration of the paradox of wealth. But it appears only as a special case of the larger thesis Lauderdale advances, “that in proportion as the riches of individuals are increased by an augmentation of the value of *any commodity*, the

¹ A critique of Lauderdale's ideas was formulated by Daniel Raymond (1820, pp. 98–99) on this point. Raymond argued that it is not because a good is scarce that it could be valued in monetary terms, but because it is exchanged. Conversely, air would not be free because it is abundant, but because it is not exchangeable.

wealth of the nation is generally diminished” (Lauderdale, 1804, p. 50, our italics). To prove this inverse relationship between public wealth and private riches, he examines in great detail the effects of the variations of supply and demand on the value of a commodity, and their consequences on the alteration of expenditure, i.e. cross-price elasticities of demand.² From these investigations, Lauderdale concludes “that there exists only one case, and that a very improbable one [...] in which an increase in the mass of individual riches produces a similar effect on the wealth of the nation” (p. 105). This could happen “when the quantity and the demand for any commodity are proportionally increased, and funds at the same time are created for the acquisition of the increased quantity, as well as the satisfaction of the increased demand” (p. 105).

Despite the precision of his analysis, his demonstration of the inverse relationship between public wealth and private riches appeared not fully satisfactory to his contemporaries. David Ricardo agreed with Lauderdale in the case of an actual scarcity of water. He also recognized that the exchangeable value of all goods could diminish as a result of an increased quantity of commodities (Ricardo, 1817, pp. 378–379), as Lauderdale (1804, pp. 45–46) claimed. He denied, however, that the sum of private riches would augment in presence of a monopoly. If water were to be exclusively possessed by one individual:

“You undoubtedly will increase the riches of this individual, but inasmuch as the farmer must sell a part of his corn, the shoemaker a part of his shoes, and all men give up a portion of their possessions for the sole purpose of supplying themselves with water, which they before had for nothing, they are poorer by the whole quantity of commodities which they are obliged to devote to this purpose, and the proprietor of water is benefited precisely by the amount of their loss” (Ricardo, 1817, p. 383).

In the case of a formerly free good, this could be explained by the fact that Lauderdale did not

² As suggested by Herbert F. Jr. Thomson (1970, p. 352), this reflection probably came to Lauderdale's mind because of the price fluctuations of the alternating states of war and peace at the turn of the 19th century.

strictly confine private riches to the addition of the exchange value of goods, but also include private properties. Private riches would therefore increase as all the wells of the country acquire monetary value (Lauderdale, 1804, p. 45). Notwithstanding Ricardo's distinction between monopoly and scarcity – which is not considered in the 1819 edition of the *Inquiry* – Lauderdale constantly puts the emphasis on monopoly practices that led to the increase of average prices, as a consequence of a lesser quantity of goods brought to the market – what will later be called *contrived scarcity* –, whatever the cause of this reduction. This is because he wanted above all to show how the growth of merchants' fortunes was contradictory with the pursuit of the general interest. The reasons for that are tightly related to Lauderdale's political opposition to William Pitt the younger, accused of having betrayed the Whig values to become a prime minister enslaved to the king and to the mercantile interest (Thomson Jr, 1970; Boyer and Hupfel, 2017).

Lauderdale started his reflection in political economy with the subject of public finance, to criticize Pitt's 'funding system,' on which he published four discourses or essays (Lauderdale, 1796, 1797, 1798, 1799). Even though his position changed during these years (see Thomson Jr, 1970 for a detailed analysis of these pamphlets), his general idea stayed the same: to bring to light the financial devices set up by Pitt's ministry to finance the war without any parliamentary control, and to denounce their devastating economic effects. Lauderdale's *Inquiry* can be seen as the most refined outcome of these efforts, where he focused his critique on the sinking fund, introduced by Pitt in 1786 and rearranged several times afterwards. £ 1 million annually was allotted to the fund – £ 200,000 more from 1792 onward – raised through additional taxes and managed by a board of commissioners who bought English public debt stocks. Its operation was based on the theory of compound interest, elaborated by the mathematician Richard Price, according to which the accumulation of interest payments will rapidly enable to extinguish the debt (Cone, 1951). Many contemporaries were attracted by the magical aspects of this theory, which was also widely criticized as a delusion, and finally rejected by Robert Hamilton (1813) and Ricardo (1815, pp. 18–49, 1820).

They showed that debt reductions could only be made thanks to the surplus of tax income over expenditure. This is how British public debt indeed decreased in the first years of Pitt's sinking fund (O'Brien, 2009). Things changed with the beginning of the war in 1793, when the government started once again to borrow on a large scale, issuing much more bonds than the sinking fund was able to redeem.³

In this context, Lauderdale (1804, pp. 207–272) depicted the sinking fund as the new and most advanced device of the mercantile system, intended to sustain a foolish war, and to serve the monied interest. In his view, financial actors would benefit from the artificially high price of public securities and a too low rate of interest. This would act as an incentive to accumulate capital goods – provoking an increase of private riches – rather than augmenting the stock of useful consumption goods, or public wealth. Commercial agents would profit from the raising prices caused by this scarcity, at the expense of the consumers, who were also affected by new taxes. The changes in taxation would even more seriously hit the landowners, including Lauderdale himself. In fact, it seems impossible to determine precisely which income and social groups carried the burden of Pitt's funding system (O'Brien, 1988, p. 17). But Lauderdale's way to point to the growing power of the merchants and financiers as a danger to democracy and the general interest, through the control of the funding system, opposed to the people represented by the landholders, is characteristic of the Whig political language that dominated 18th-century British politics (Pocock, 1985).

The developments on value and wealth presented by Lauderdale in his *Inquiry* have to be seen in this light. They were meant to demonstrate that public wealth is always threatened by

³ The gap grew to such an extent that nobody could anymore believe, at the end of the war in 1815, that the sinking fund would be able to reach his original purpose. It continued its existence though, until parliament decided to cut it down in 1823, before its final abandonment in 1829. Despite the fallacy of the principle on which it rested, the sinking fund may have helped to avoid the collapse of public credit – which was a real possibility in this critical time –, operating as a mark of government's commitment to safeguard sovereign credibility and future borrowing power (Bordo and White, 1991, p. 307).

the combinations of merchants and financiers (Lauderdale, 1804, p. 54), who invariably try to restrain quantities in order to raise prices. Measures of wealth based on the addition of individual riches, as inspired by William Petty's political arithmetic, could be used as a tool, in this framework, to present legislations designed to favor the private interests of a narrow financial elite as if they were enhancing the public good (Lauderdale, 1804, pp. 100–101).

3. A brief genealogy of Lauderdale's paradox

Lauderdale's *Inquiry* circulated rapidly after publication, and was identified by many contemporaries as a noticeable contribution to the emerging field of political economy. Henry Brougham (1804), a member of the younger branch of the Whig party, influenced by the philosophical radicals, harshly criticized the book in the *Edinburgh Review*, primarily for reasons of political rivalry. He judged that Lauderdale's distinction between private riches and public wealth was deficient (as we will see in section 4) and that it did not add anything to the dichotomy between use and exchange value. Brougham also discarded almost all of Lauderdale's contributions regarding labor or capital, as resting on misconceptions of the established principles of political economy, especially Smith's ideas. On the contrary, Dugald Stewart (1856 [1800–1810], p. 456) recommended reading the *Inquiry* to his students. Lauderdale's theses were considered by Ricardo (1817) in different editions of his *Principles*, as well as by Malthus (1836). In particular, the distinction between private riches and public wealth aroused attention, and could be found in many essays, which often did not even mention Lauderdale's name. This was the case of John Stuart Mill (1848, pp. 7–9) and Frank W. Taussig (1911, pp. 3–8), for instance.

The *Inquiry* was translated into French and German in 1808, and a second edition, without any major change, was published in 1819. Lauderdale's reflections on wealth were also considered by Daniel Raymond (1823) and abundantly mentioned by most German historicists (e.g. Hildebrand, 1848; Roscher, 1858). Austrian scholars were just as much and maybe even more interested in Lauderdale's ideas. Carl

Menger (1871) discussed in detail his distinction between value and wealth, and was probably the first to introduce the expression of a Lauderdale "paradox." Eugen Böhm-Bawerk (1884, p. 143) granted him "rather an important place" in the theoretical history of interest, and Frank A. Fetter (1945) later analyzed his "oversaving theory." More generally, Lauderdale has been mentioned in most of Austrian histories of thought, like Israel M. Kirzner's (1960) and Joseph A. Schumpeter's (1954, p. 462). In his characteristic view of the history of economics as a horserace, Schumpeter considered that Lauderdale occupied "a secondary position in the history of economics." Lauderdale's contributions were at that time reduced to his *Inquiry* in most cases, and considered only for the sake of scholarship in the history of economic thought.

Before ecological economics was formally established in the 1980s, a whole current of ecological economic thought, especially in the eco-Marxist tradition, opted for a "social concept of wealth" (Foster and Clark, 2009, p. 2; Foster et al., 2010, p. 87), of which Lauderdale would have been one of the first promoters. John Bellamy Foster and Brett Clark identify after him Karl Marx, Henry George, Thorstein Veblen, and Frederick Soddy as major contributors who insisted on the non-marketable components of wealth broadly speaking, sometimes with references to Lauderdale. This perspective would have been enhanced by Karl William Kapp (1950), who explicitly identified Lauderdale as a forerunner of his theory of social costs. As Clive Spash (1999, 2021) has demonstrated, Kapp provided an alternative to the conventional treatment of environmental degradation based on the so-called internalization of externalities, considering that social costs covered all "losses caused by productive activities and borne by third persons or [...] shifted to society as a whole" (Kapp, 1969, p. 334). He did not limit them to the degradation of the natural environment; social pains, in particular, were also part of the story. For instance, in Kapp (1970, p. 844), the discrepancy between narrow economic maximization and sound social objectives is clearly stated: "the rational pursuit by the [economic] sub-system of the objective of maximizing net advantage (profit, utility) will take place by sacrificing with impunity those values and objectives which,

from the point of view of the macro-system may be highly important and in fact constitute the foundations of individual well-being and survival.” The general idea and objective emphasized here by Kapp appear consistent with Lauderdale’s reflections on public wealth and private riches.

In modern ecological economics, George E. Foy (1989a, 1989b) was the one who fully rediscovered Lauderdale’s distinction between private riches and public wealth during his doctoral research at Louisiana State University. Foy was in contact with Daly and this opened the way to the 1990s debates mentioned in the introduction.

More recently, Jason Hickel referred to the Lauderdale paradox in his work on degrowth, presenting degrowth as the reversal of the paradox, “to reorganize the economy around generating an abundance of public wealth even if doing so comes at the expense of private riches” (Hickel, 2019, p. 65, Hickel, 2020, p. 275).

Today, further mentions of Lauderdale can be found in the literature at the intersection of political economy and commons issues, in particular with respect to global warming (Weston, 2014) and sheries (Longo et al., 2015). In this perspective, Guy Standing (2019, pp. 48–49) argued for the centrality of the Lauderdale paradox in the double “tragedy of decommoning” and “privatizing” of natural riches. Focusing on the seas and oceans as typical cases of commons subject to appropriation and marketization, regardless of their public value, he considered the paradox as perfectly depicting the effects of contrived scarcity for the general well-being (Standing, 2022).

4. Wealth, riches and environmental accounting

In his analysis of the Lauderdale paradox, Foy (1989a) argued that one derivative of the distinction between private riches and public wealth was environmental accounting. Today, environmental accounting generally speaking has three dimensions: (i) ecosystem accounting in biophysical terms (e.g. quantity of resources, number and characteristics of species, chemical flows); (ii) corporate accounting to report on the way firms use the environment as an input in

production processes and a sink for waste; (iii) national accounting to explore the role of nature in sustaining national wealth. In the 1980s, environmental accounting was still in its infancy. The limits of usual indicators such as net domestic product (NDP) or gross domestic product (GDP) had been pointed out for at least two decades, in the context of increasing environmental concerns (e.g. Nordhaus and Tobin, 1972; see Dimand, 2022). Because they did not take into account resource depletion and considered pollution as producing value through cleanup expenses – what was called *defensive expenditures* – they could not be seen as satisfying. One option, reported by Foy and fostered by economists such as Henry Peskin (1981), was to deduce from aggregate indicators a selection of environmental costs and externalities, to get corrected NDP and GDP.

The parallel emergence of the notion of natural capital (Pearce, 1988; see Victor, 1991; Akerman, 2003; Bell, 2005; Nadal, 2016; Missemmer, 2018, 2021a) helped to design frameworks considering natural wealth – including free goods – as something different from the natural resources commonly traced in production processes by GDP calculations. On this matter, Daly (1989a) early decided to mobilize the notion of natural capital to highlight the analogy with manmade capital, implying similar depreciation rules: if natural capital is degraded by economic activity as manmade capital wears out, we should apply depreciation to its global value as we do for manmade capital, and include this depreciation in the calculation of NDP. This led Daly (1989a, p. 8) to propose a “sustainable social net national product (SSNNP)” excluding defensive expenditures and including the depreciation of natural capital.⁴

Retrospectively, these 1980s innovations seem in line with Lauderdale’s ideas, highlighting the difference between, on the one hand, the sum of exchange values (i.e. GDP or NDP) and, on the other hand, true national wealth, including non-used natural capital. In this sense, Foy (1989a) was right to make the connection between Lauderdale’s paradox and early environ-

⁴ Despite the many criticisms addressed to the notion of natural capital since the 1990s, Daly (2020) defended the term for its heuristic value.

mental accounting. A closer look at Lauderdale's writings helps, however, to clarify the meaning of this connection. Early (and later) environmental accounting basically aimed at constructing alternative aggregate indicators and measurements of public wealth to report more accurately on the unsustainability of current economic dynamics. Accounting is firstly a matter of conventions and arithmetic to understand, control and steer economic activities. As mentioned above, Lauderdale was very critical of what was known as political arithmetic, in the footsteps of Petty (1676), and more generally of the use of calculus to conduct public action.⁵ This is because indicators could always be twisted by lobbyists, entrepreneurs and private investors, in order to align legislation with their interests. In Lauderdale's perspective, the problem with the distinction between private riches and public wealth was not simply a matter of aggregate indicators or measurement. These indicators could always be subject to manipulation, as "nothing but the impossibility of general combination protects the public wealth against the rapacity of private avarice" (Lauderdale, 1804, p. 54). His idea was more to insist on the qualitative contrast between exchange and use value. In words familiar to ecological economists, we would say that he considered public wealth more as a *dialectical* than *arithmomorphic* concept (Georgescu-Roegen, 1971). This means that Lauderdale's main challenge was not to find accurate measures of public wealth, but to escape any simple, arithmetic definition of wealth. He would hardly have been fully enthusiastic, therefore, towards environmental accounting initiatives focusing on aggregate corrected indicators, and probably would have shared the more critical viewpoints that emerged in the late 1980s regarding the methods then employed (see for instance Norgaard, 1989).

Interestingly, environmental accounting took more sophisticated paths after the 1980s (for a survey, see Comte et al., 2022). In 1993, the

⁵ One key element of Lauderdale's thought was his definite opposition to any attempt to reduce politics to an administrative science, based on calculus, which could partly account for his conflictual relationships with the utilitarians. Since then, the role of calculation and measurement in public action and government has been widely documented (e.g. Desrosières, 1993).

United Nations launched the first official version of the system of environmental economic accounting (SEEA), inviting all countries to implement in their own national accounting frameworks information about the degradation and management of the natural environment. Following the 1980s proposals, the first versions of the SEEA focused on natural capital, even though other possibilities, especially in terms of maintenance costs of ecosystems, were discussed. The subsequent logic (e.g. 2002 and 2012 revisions) has been to enlarge the framework to include more and more natural items in the accounting system, with different lines of development: either through monetary or biophysical indicators, sometimes with different rationales for natural assets and ecosystems. Generally speaking, ecosystem services became key, with two conceptual difficulties to address: their identification and their measurement. At first sight, the SEEA framework seems to have neglected Lauderdale's distinction between private riches and public wealth. It is true that Lauderdale, although he mentioned a few natural resources, did not refer to any ecosystem services. Obviously, the concept did not exist in the early 19th century. Yet the idea of *services of nature* did exist (Gomez-Baggethun et al., 2010; Missemmer, 2021b; Vianna Franco and Missemmer, 2023). Alexander von Humboldt, for instance, considered guano as resulting from a sort of service provided by birds. So Lauderdale could have thought in terms of services of nature; he did not.

His distinction between private riches and public wealth may, however, enrich the conceptual framework of ecosystem services valuation, in relation to the SEEA and beyond. Indeed, Lauderdale's paradox also applies, in a slightly reformulated way, to ecosystem services: when a service of nature works well, it contributes to increase public wealth without being economically recognized; when it is threatened by pollution and human activity, we start measuring it (in biophysical or monetary terms). This gives the impression that we are more aware than before of the riches provided by nature, while public wealth actually decreases – this is directly related to Daly's (1998) argument to call attention to Lauderdale's paradox. Natural pollination is a good example: economists started to measure its value, in billions dollars,

when we got conscious that bees were massively endangered, with correlated risks for agriculture (Gallai et al., 2009).

Another evolution in modern environmental accounting, which finally did not influence the extension of the SEEA very much, despite lasting discussions, has been to consider nature not as something to be included in enlarged economic measurements but as a standalone economic agent making transactions with other agents (households, firms, etc.).⁶ In this perspective, neither natural capital nor ecosystem services have to be valued to produce accurate accounting frameworks. Nature is considered as economically incommensurable, i.e. not to be monetized. What should be monetized, in contrast, are the costs that are actually not paid but that should be paid if we wanted resources and the environment to be preserved. Each year, economic agents benefit from nature, through resources, waste sinks, etc., without bearing the costs. These costs can however be assessed, for example by the costs of ecological restoration and offsetting (Levrel, 2020). The accumulation of these costs overtime leads to the constitution of an ecological debt, to be entered on the liabilities side of economic agents' balance sheets. This approach to environmental (or ecological) accounting, based on the notion of *unpaid ecological costs*, was firstly imagined in the 1990s, especially in the French context which had a specific tradition of considering natural patrimony in national accounting (Weber, 1987; Theys, 1989; Vanoli, 1995). It gained traction in the 2010s and there are now attempts to measure those unpaid costs for several types of ecosystems (Devaux, 2015; Vanoli, 2015; Comte et al., 2020). In a sense, Lauderdale's proposals are compatible with the notion of unpaid ecological costs because they can be seen as a means to identify the gap between private gain and public cost.

Another challenge in modern environmental accounting is more straightforwardly related to Lauderdale's concerns. As we have seen, Lauderdale was not able to explain precisely why monopoly practices of curtailing the amount of goods offered would increase private riches. This

⁶ See for instance the work conducted by the AgroParisTech chair of ecological accounting: <https://www.chaire-comptabilite-ecologique.fr>. See also Levrel and Missemer (2023, chap. 6).

point was raised by Brougham (1804, pp. 351–352) in his scathing review of the *Inquiry*. If a lesser quantity of grain causes an increase of its price – Lauderdale's example – the farmers' fortunes would augment exactly in proportion to the consumers' loss, so much that the sum-total of private riches would remain the same (the same argument was advanced by Ricardo, 1817, p. 384, as mentioned above; see also Raymond, 1820, p. 100). Lauderdale's answer was that, as “the grain could not be acquired by giving other articles of production in exchange for it,” this situation must “involve the necessity of part of the produce in grain being paid for, by the consumers giving in exchange for production a proportion of what may be called their capital, in the general sense of the word, as opposed to revenue” (1804, p. 27). Private riches would indeed augment because some sort of capital with no exchange value would be transformed into commodity. Unfortunately, Lauderdale did neither give further details nor other examples about this process, which appears more clearly in presence of an environmental good. Yet Lauderdale's theory was not at all limited to this case. The capital turned into commodity could either be natural, human or social.

When sustainable development was coined in the 1980s, it was intended to cover three dimensions: economic prosperity, environmental sustainability, and social equity. The discussions on national accounting frameworks, which took place in the 1990s, tried to address these three dimensions. The successive revisions of the SEEA were designed to add an increasingly robust environmental module to economic accounting systems. Regarding social issues, some discussions were conducted to include *human* and *social* capital preservation and enhancement into accounting frameworks. However, consensus was hard to find, and controversies about the best way to include human capital in national accounting never ended (Canry, 2020). In other words, the progress made in environmental accounting has not been paralleled by similar progress in human and social capital accounting at the national level since the 1990s. Today, the SEEA and other similar frameworks thus address only two thirds (at best) of the issues raised by sustainability debates, leaving aside the social

dimension.⁷ The initiatives on human and social capital accounting are almost always kept separate from environmental accounting systems – see for instance the human capital framework proposed by the United Nations Economic Commission for Europe, which makes no mention of the SEEA (UNECE, 2016).

The reference to Lauderdale’s writings could help to question the limitations of these schemes, and reminds us that their objective should be to assess the portion of growth derived from the valorization of a capital (not only natural but also human or social) previously located outside the market sphere. That is to say, to estimate the extent to which private riches increase at the expense of any form of public wealth.

5. A critique of commodification

In the long history of ecological economic thought, in addition to those listed by Foster and Clark (2009), many contributions seem reminiscent of Lauderdale’s general critique of market-based valuation. Pierre Leroux in France in the 1840s–1850s, Russian utopians in the late 19th century or Otto Neurath and Josef Popper-Lynkeus in the German-speaking world in the early 20th century, pointed to ecological issues as well as social and political concerns in their critique of mainstream economics (Martinez-Alier, 1987; Simmons, 2015; Vianna Franco, 2020a, 2020b; Vianna Franco and Missemer, 2023).

Lauderdale’s *Inquiry* can be considered as the first serious attempt to introduce the hypothesis, in the modern era of economics, according to which the growth of monetary indicators of wealth would be based on the depletion of some of its non-monetary components. That is why Daly (1998, p. 23) described the Lauderdale paradox as “the price we pay for measuring wealth in terms of exchange value.” This price was judged negligible by classical economists, who rejected Lauderdale’s hypothesis as a proper foundation of their theoretical edifice. Most of them kept the distinction between private

⁷ National accounting certainly makes it possible to address the sharing of GDP between social classes, but this is only a very narrow part of social issues related to sustainability.

riches and public wealth in the background though, and conceded that something like a shadow cost could become significant in some cases (see especially Ricardo, 1817, pp. 377–388; 552–553; Mill, 1848, p. 8). Since then, this position has been shared by most conventional, mainstream economists, who “have relied on a practical judgment, namely, that a change in economic welfare implies a change in total welfare in the same direction, if not in the same degree” (Abramowitz, 1979, p. 4).⁸

When Daly (1998, p. 23) insisted on the “return of Lauderdale’s paradox,” he emphasized Lauderdale’s claim for redefining wealth, to include “non-marketed goods and services” in the equation. Actually, when it amounts to the critique of the perception of the natural environment (and other non-marketed realities) by the economic discipline, issues pertaining to economic valuation are part of what is usually more broadly called *commodification*. Commodification in general, and the commodification of nature in particular, refer to a wide array of phenomena, including the use of economic words and representations to deal with non-economic items (e.g. natural capital to talk about natural resources, agents of production to talk about species), including also processes of marketization (i.e. transformation of a non-economic good into an exchangeable commodity), privatization (i.e. to grant private property rights over a previously common or public space or asset – land-grabbing is a well-documented manifestation of privatization, see Borrás Jr et al., 2011), monetization (i.e. to put a monetary price on a non-marketed good or service), and financialization (i.e. to create financial assets with non-economic collaterals) (Levrel and Missemer, 2019). The literature on the commodification of nature emerged in critical geography (e.g. Castree, 2003; Bakker, 2005) and spread over different fields in the 2000s and 2010s, including ecological economics (for a review, see Smessaert et al., 2020).

This kind of processes played a key role in Lauderdale’s reasoning. We have seen that the

⁸ Analyzing the evolution of health indicators and mortality rates, Case and Deaton (2020) questioned this assumption. More generally, the reflections of Deaton (2013) about the relationship between revenue and living conditions could be related to the debates over the Lauderdale paradox.

inverse relationship between private riches and public wealth that he wanted to prove ultimately rested on the commodification of a capital. He did not totally grasp this point though. Neither did he de ne precisely this capital, nor the terms of its transformation into commodity. Nevertheless, Lauderdale invited us to question the nature of economic expansion in an anthropological perspective, i.e. combining economic, socio-cultural and behavioral determinants, even though he did not fully engage in the exploration of this perspective. He contended that the evaluation of wealth could not be separated from a critical study of the tools used to measure this wealth, and of the effects of these tools on human, physical, social and political environment. In doing so, he opened a vast array of research in social science, of which one of the most famous examples is certainly the work of Karl Polanyi (1944, 1977), focused on this intertwining between political, social and economic dynamics.

More recently, the approach attentive to the social effects of commodification has been developed in different research programs. Arjun Appadurai (1981, 1986, 1996) proposed to study “regimes of value” (1986, p. 4) and their political underpinnings. This enables, in particular, to enquire into the effects of new measures of economic progress on traditional economic organizations – especially about globalization in the developing countries. In a more historical perspective, Jan De Vries (1994, 2008) argued that an “industrious revolution” – a change of households’ behavior and organization stimulated by market-oriented strategies – paved the way for the industrial revolution in Europe. Another example is the ethno-accounting enquiry led by Cottureau and Marzok (2012), who show very precisely how people bargain and choose the criteria on which a non-market service (babysitting in this case) should be valued, and the differences with the contracts and prices prescribed by labor law.

Compared to these research programs, Lauderdale’s reflections in relation to commodification might appear exploratory or barely speculative. Even though he did not perceive all facets of commodification, he pointed to the multidimensional consequences of making non-marketed goods and services enter the economic sphere, in terms of classification, measurement,

and even shaping of public policy. That is why he firmly denied that this problem could ultimately be solved by new indicators. It could only be worked out through socio-political compromises – his Whig ideal of government and democratic practice – to agree on what is deemed useful and delightful to man by a community.

This perspective, from Lauderdale to the approaches mentioned above, invites to question the valuation process itself (Dewey, 1939; see also Commons, 1934 on reasonable value). In the field of environmental justice (Martinez-Alier, 2002), it could help to examine the socio-political issues involved with the incommensurability of values – how people bargain and find compromises despite this incommensurability – both to enrich our perception of environmental conflicts and to inquire into their possible resolution. Ultimately, it amounts to decommodify wealth, an objective which retrospectively appears particularly relevant in face of the growing literature on decommodification in ecological economics (e.g. Gerber and Gerber, 2017).

6. Growth, accumulation, and the steady-state economy

In the beginning of the 19th century, Ricardo (1817, p. 140) established a canon regarding the distinction between value and wealth: political economy should focus on exchangeable value, as no objective measurement of wealth could be found. Socialist thinkers, however, continued to refer to this issue to point to the limitations of classical political economy. Pierre-Joseph Proudhon (1846), for example, based his reflections on the relationship between use value and exchange value, to show the disconnection between the productivity of labor and the wages distributed to workers. Despite his criticisms of Proudhon’s developments, Marx adopted broadly the same perspective, in which the question of value and wealth is raised first and foremost through the issue of labor power and income (Burkett and Foster, 2006, pp. 120–121). It is definitely possible to find some similitudes between Lauderdale’s and Marx’s reasoning about the disconnection between use and exchange value. But it is also important to underline that Lauderdale’s thought originated neither from the

same context nor from the same intellectual tradition.

Notwithstanding his well-known sympathy for the French Revolution, Lauderdale stayed remarkably silent on the emerging social issues of the industrial world – the Poor Laws, the effects of machinery or wage regulation (Hupfel, 2012, 2019). He remained all through his career a Scottish aristocrat, whose arguments were crafted in the very different context of the late 18th century, when war, the national debt or trading companies were major political matters. He appears closer in this regard to Malthus, who had been trained amidst these debates and also belonged to the “Whig genus” (Winch, 1996, p. 14). Some of Lauderdale’s reflections on capital and its accumulation, to which he dedicated an important part of his book, could also look like the reasoning of socialist or Marxist authors. But they did not at all arise from the will to defend the laborer against the claims of capitalists. Lauderdale’s aim was chiefly to denounce the plundering of national resources organized by the agents of the mercantile system.

One of Lauderdale’s main achievements was to reject Smith’s definition of capital as “increasing the productive powers of labor” (Lauderdale, 1804, p. 185). This definition could lead to the belief that “labor is everywhere proportioned to the quantity of existing capital, that the general industry of a country is always proportioned to the capital that employs it, and therefore authorizes the inference, that the increase of capital is the sovereign and unbounded means of augmenting wealth” (p. 205). On the contrary, Lauderdale argued that “there must be, at all times, a point determined by the existing state of knowledge in the art of supplanting and performing labor with capital, beyond which capital cannot profitably be increased, and beyond which it will not naturally increase” (p. 228). Accumulation over this point will not increase production, and thus public wealth, but “may be a method of transferring wealth” (p. 209). This is precisely the operation of the sinking fund, presented above. In supporting the value of public securities, it contributed to maintain an artificially low rate of interest, which encourages overaccumulation.

More precisely, the effect of the sinking fund – and “overgrown financial arrangements”

(p. 212) in general – is to divert the channels of industry towards the (inefficient) fabrication of production goods, at the expense of consumption goods.⁹ At the turn of the 19th century, this was seen as a perversion of the natural order, in which demand determines the nature and quantity of goods produced. Instead, production is driven away from demand, and from the ideal path in which private riches and public wealth grow together. This result is achieved through a forced saving, both because of the increase of the prices of consumption goods and the taxes levied to supply the sinking fund. The beneficiaries of this forced accumulation are the big merchants, manufacturers and financiers, who profit from the high price of public securities and consumption goods. And the owners of capital will be able to present the sinking fund as favorable to the general interest, basing on the measurements of political arithmetic, although it will only lead to increase (their) private fortunes.

On the industrial level, overaccumulation means that investments will be oriented on a path “which is useless to mankind” (p. 101), that is to say they will not contribute to enhance production, and even less public wealth. To some extent, this reasoning can be compared to Veblen’s reflections on “industrial sabotage” (Veblen, 1921) as an attribute of financial capitalism, an author which is mentioned by Foster and Clark (2009, p. 11) about the paradox of wealth. Veblen’s view is that businesspersons constantly try to restrict the volume of output to guarantee the largest obtainable profit. Although Hickel (2020, p. 275) uses the reference to Lauderdale to support his claim to decommodify public goods, he does not seem to see the relationship between Lauderdale’s reasoning and his idea that growth would be stimulated by the creation of an artificial scarcity on consumption goods markets (Hickel, 2019, p. 54, Hickel, 2020, p. 72).

⁹ To illustrate his stance, Lauderdale (1804, p. 215) takes the example of a farmer who, already having at his disposal as much capital as he can use, would “abridge his consumption of food, clothing, and the other objects of his desire, for the purpose of accumulating a much greater quantity of capital than can by possibility be employed in supplanting labour.” He also mentions, as examples of overinvestment, “the finest palaces in the world [which] stand empty at Delhi, unoccupied and undesired; and the spacious warehouses at Antwerp, [which] serve only as monuments of her departed commerce” (p. 221).

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The analytical resemblances between Lauderdale and Malthus' ideas actually appear even more striking, in addition to their historical and political proximity. Both of them put special emphasis on demand, which they present as the key factor to understand economic dynamics, following the Physiocrats. Both of them stress – for different reasons though – the danger of an insufficient demand, later called “underconsumption” (Bleaney, 1976, p. 26), “oversaving” (Fetter, 1945) or overaccumulation. Regarding policy issues, Malthus and Lauderdale, even if significant differences remained between their arguments (Thomson Jr, 1970, p. 378), were among the few economists who supported the Corn Laws, fearing the consequences of a too rapid conversion to industry. They pleaded for a more balanced and diversified economy, corresponding to a steadier path towards industrialization (Paglin, 1961, p. 91).

The most desirable horizon Lauderdale pictured in the last chapter of his *Inquiry* interestingly looks like some sort of steady state. Such a state would be based on the government of virtuous (Whig) politicians – probably landed aristocrats like him – as guardians of the Constitution, who will hinder the rising power of the monied interest. As a result, the influence of the financial sector as well as capital accumulation would be checked, and better adjusted to the demands of the people at large. Lauderdale (1804, pp. 314–365) finally added that this steadier state of things would correspond to a more equal distribution of wealth and a freer trade – the first characteristic, at least, being reminiscent of more recent work in ecological economics on the steady state economy or prosperity without growth (Daly, 1977; Jackson, 2009; Victor, 2019), which shows that Lauderdale could be a source of inspiration on this matter as well. In contrast to Daly, Jackson and Victor, Lauderdale did not consider the natural environment as a specific element of his steady-state or low-growth proposals; this element does never appear separate in Lauderdale's reasoning from the economic and social dimensions of what we now call sustainability.

7. Concluding remarks

When Foy (1989a) and Daly (1989b) rediscovered Lauderdale's paradox of private riches and public wealth in the context of the emergence of ecological economics, they mainly hinted at questions of values and accounting. Lauderdale's contribution to the reflections of today's ecological economists and political ecologists remains mostly based on this interpretation, which we are now able to qualify and enrich.

In this article, we showed that Lauderdale's *Inquiry* was written in a particular moment of British political history, at a time of contested financial and war policy, by an aristocrat who participated in Classical political economy's debates of the late 18th century. Lauderdale's critique of political arithmetic can be explained by this context of writing, when the issue of merchants and financiers taking control over economic policy was predominant. Retrospectively, it reminds us that solving the paradox of private riches and public wealth, especially with respect to the natural environment, cannot be achieved merely by new aggregate indicators in environmental accounting. It involves broader conceptual, philosophical and even anthropological issues, which are not limited to calculation and measurement.

A careful reading of Lauderdale brings to light new sources of inspiration for today's ecological economics research agendas, not limited to value theory. It also invites us to study commodification and decommodification processes in an extended, anthropological and behavioral way, and provides new historical landmarks regarding the steady-state economy, in addition to the classic references to Ricardo and Mill (e.g. Boulding, 1973; Daly, 1974; Buckley, 2011).

Generally speaking, it has been suggested that ecological economists have much to find and to discuss in Classical political economy about value and production processes (Douai, 2009; Harribey, 2013; Pirgmaier, 2018; for a more contrasted view, see Röpke, 2021; Hornborg, 2022). Lauderdale took part in the discussions that led to the emergence of the discipline at the turn of the 19th century, before political economy was identified with Ricardian orthodoxy. The reference to Lauderdale reminds us that key in-

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sights for today can be found in the ideas of authors from the 18th and early 19th century lesser known than Smith, Ricardo and Malthus. There is undoubtedly room for further research into the history of ecological economic thought.

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