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The poverty of radical ecological economics: A critique of Clive Spash from the viewpoint of the Austrian School

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Abstract. This paper delves into the work of Clive L. Spash, a British radical ecological economist well-known in his field who currently holds a professorship at the Vienna University of Economics and Business. We start with an examination of the principles of his “social ecological economics.” We then critically evaluate his attack on economic growth and his perspective on the standard economic models of climate change. Lastly, we explore his approach to science as a theoretical pursuit and his policy recommendations.¹

Ecological economics is a significant and multifaceted research program that investigates the environmental challenges faced by growing human economies. This discipline can be approached from various perspectives and this paper explores it through the work of one of its most radical proponents, British economist Clive L. Spash. A prominent and well-known figure in his field, Spash is currently a professor at the Vienna University of Economics and Business in Austria where he holds the Chair of Public Policy and Governance at the Department of Socio-Economics. With an impressive publication record, he has authored approximately 150 papers and book chapters, including 13 papers featured in the major journal of the field, *Ecological Economics*. Notably, he edited in 2009 a four-volume collection of classic works in ecological economics and more recently, in 2017, published the *Routledge Handbook of Ecological Economics*. Additionally, he was for many years the editor of the academic journal *Environmental Values*.

As a radical economist, Spash is very critical of orthodox economics and challenges utilitarian ethics. He staunchly rejects capitalism and advocates for a profound reorganization of the economy and lifestyles in affluent nations, in order to avoid potentially catastrophic and irreversible environmental damage. His ideas often present a stark contrast to those of the Austrian School, making the comparison between the two perspectives enlightening. Section 1 of this paper outlines Spash’s methodology for the field of ecological economics. Sections 2 and 3 delve into two highly debated topics within these circles, namely economic growth and the

¹ The first version of this paper was given as a keynote lecture at the 7th *Austrian Economics Meeting Europe*, May 12-13, 2023, Université Catholique de l’Ouest, Angers, France, and a second version at the *Summer University in Political Economy*, July 20-22, 2023, Aix-Marseille University, France. I wish to thank the organizers of these conferences, and also the anonymous referees whose remarks have been taken into account to improve the paper.

economic models of climate change, respectively. Finally, Section 4 analyzes Spash’s general scientific approach and examines his policy recommendations, answering an overarching question of this paper—is Spash’s research program scientific or rather normative/ideological?

1. Spash’s “social ecological economics”: An Austrian critique

In his analysis of ecological economics, Spash (2013) contends that there exist three distinct “camps.”² The first one, which he refers to as the *New Environmental Pragmatism*, is associated with Robert Costanza (Costanza et al. 1997). Spash characterizes this approach as being less concerned with theoretical frameworks and more focused on policies. These “pragmatists” embrace the prevailing (neoliberal) system and participate in the “commodifying, quantifying and pricing Nature” (Spash 2013: 354). They promote initiatives such as carbon trading, Green accounting, and biodiversity offsets. Spash makes clear that he disapproves of all these neoliberal measures and prefers that ecological issues be addressed by “civil protest and organised social resistance.”

The second camp, the *New Resource Economics*,³ also falls under the neoliberal framework, but it distinguishes itself by having a comprehensive theoretical foundation rooted in the “neoclassical and orthodox economic tradition.” Spash associates it with Herman Daly (1974). The latter supports the use of market prices to allocate resources within a “steady state” that maintains a stable population, implements the rationing of natural resources, and redistributes wealth. The objective of “New Resource Economics” is to incorporate ecological economics as a subset of orthodox economic analysis, simply by adding the goal of sustainability to the traditional pursuit of efficiency. Spash portrays orthodox economics as formalistic, mathematical, abstract, methodologically verificationist, ethically utilitarian, and ideological (due to its faith in the market). He rejects all of these principles and advocates for ecological economics to be grounded in heterodox economic schools such as “critical institutional,

² For a critique of this classification, see Levrel and Martinet (2021).

³ The same name, “New Resource Economics,” was used in the 1980’s for a paradigm developed by Anderson (1982) and other authors, in which the economics of resources was not based upon standard neoclassical economics but instead upon property rights theory, public choice theory, and Austrian economics.

evolutionary, feminist, neo-Marxist, psychological, Post-Keynesian, critical realist and social.”⁴ While the “New Resource Economics” aims to manipulate the price system to achieve environmentally friendly outcomes, Spash instead favors a “direct regulation of behavior” and a “structural change in social and economic systems” (2013: 356).

Spash strongly believes that these two camps are excessively conservative. In his view, ecological economics should embrace a radical departure both from a-theoretical pragmatism and ideological economic orthodoxy. He introduces the third camp, which he calls *Social Ecological Economics*, as his own perspective. He broadly characterizes it with concepts such as realism, unpredictability, pluralism, and interdisciplinarity.

(1) *Realism*. “Social ecological economics” (SEE) should rest upon *behavioral realism*⁵ (“consumer theory should be consistent with actual human behaviour”), *biophysical realism* (“production theory should be consistent with biophysical laws”), *holistic realism* (rejection of “the atomistic reduction of wholes to parts,” “accept society is different from a collection of individuals”), and *epistemological realism* (“The realist aspect does not totally exclude social constructivism but highly limits its role and excludes relativism”).

(2) *Uncertainty*. SEE acknowledges that the world is “ever changing,” characterized by instability. It recognizes “non-linearity in spatial scales, absence of equilibria, destabilising forces, uncertainty and unpredictability.” Due to the “inherent unpredictability of the future,” SEE is suspicious of the predictions of the future state of the world. Spash criticizes here the absence of humility in neoclassical models, such as those proposed by Nordhaus (1991) and Stern (2007). These models rely on a projection of the future stream of global consumption up to a century ahead. Spash argues that there is too much uncertainty surrounding such long-term projections and emphasizes the need to be “more humble than those who claim they can develop predictive models and estimate the probabilities of future world states.”

⁴ Spash does not forget to mention the Austrian School of economics. He points out that he excludes “(neo-) Austrian economics specifically because of the ideological presumption that it makes concerning the central role of markets as opposed to other social and communitarian institutions. This is not to deny the existence of insightful ideas in some writings of some Austrian economists, but rather that collaboration with social ecological economists is not on the agenda” (2013: 358). We disagree with his idea that the “central role” that markets play in Austrian economics comes from an “ideological presumption.” This role follows from an in-depth scientific study of various institutional arrangements.

⁵ The italicized terms in this paragraph (such as “behavioral realism,” etc.) are our own interpretation and presentation of Spash’s ideas. He does not use these expressions.

(3) *Pluralism*. SEE advocates for “pluralism” in values (instead of utilitarian monism) and also in scientific methodology (instead of mathematical modeling and instrumentalism). Recognizing the incommensurability of values among different groups, SEE emphasizes the need for employing multiple criteria when making ethical decisions: “Methods which can handle incommensurability of values, while probing and making explicit value differences, are necessary, e.g., disaggregated multi-criteria analysis and multi-criteria mapping.”

(4) *Interdisciplinarity*. SEE is “inherently interdisciplinary linking economics with a range of academic disciplines such as social psychology, sociology, applied philosophy, geography, politics and the natural sciences” (Spash 2013: 358).

Let us now review in turn the SEE principles.

(i) *Realism*. Spash’s demands for realism are uncontroversial in the Austrian School. Two of them, however, warrant further discussion.

Regarding the *biophysical laws*, the issue lies not in their compatibility with production theory, but rather in their relevance. In most cases, the entropy laws are as irrelevant to economic reasoning as the law of gravity, the principle of inertia, or the biological principle of homeostasis. Human action and organization occur within a physical, chemical, and biological world. Therefore, when studying action, exchange, production, division of labor, and so on, consistency is necessarily validated. The fact that the Austrian economic treatises (as well as the standard economic textbooks) never mention the second law of thermodynamics merely shows the irrelevance of this law in the context of fundamental economic theorizing, which primarily focuses on valuation and pricing.

When it comes to *holistic realism*, the idea that a system of interrelated elements cannot be reduced to its individual parts is almost self-evident. It is clearly impossible to reduce the *interaction* between Robinson and Friday to either Robinson or Friday. However, what Spash indirectly criticizes here is *methodological individualism*⁶ (MI), which is *the* methodology of theoretical social science according to the Austrian School (and to other schools in economics and sociology). Contrary to Spash’s belief, MI does not assert that society is merely a collection of individuals or reduces society solely to individuals. Rather, it seeks to *explain* social

⁶ Spash (2012) describes methodological individualism as one of the “single level ontologies” in which some “intermediate level entity (e.g. selves) are the only reality” while the “larger entities” that they compose are “mere collections.”

phenomena through human action. The aggregate or emergent phenomena that arise are distinct from the actions that constitute them and often not even part of the intentions of the actors themselves.⁷ Additionally, while a social action is always carried out by an individual, it takes place within a specific social context. Therefore, a social actor is never and can never be an atom. Spash commits a category mistake by equating MI with a reductionist ontology, whereas in fact, it is not an ontology at all. It serves as an explanatory device that has been substantiated by numerous studies in economics and sociology (Bulle and Di Iorio 2023). To continue with the example of Robinson and Friday, if we aim to explain why they fight, enslave one another, peacefully exchange, or do not interact at all, we must apply methodological individualism (Rothbard 1962).

(ii) *Uncertainty*. In the Austrian School, this concept plays a pivotal role. The static economic system is purely a theoretical construct, and Mises (1998 [1949]) rightfully views it as a limiting case that can never materialize in the real world due to the unforeseeable shocks constantly impacting the economy (primarily changes in consumers' preferences, techniques, and the availability of natural resources). A market economy is a dynamic process in which entrepreneurs seeking pure profits face inevitable uncertainty as they strive to anticipate future demand for their products. However, Spash has a different concern in mind, namely the unpredictability of human impact on Earth's ecosystems. He believes that uncertainty gives rise to the risk of "irreversible surprise disasters" and justifies a precautionary "structural change" in society. It is true that on account of the inherent uncertainty and unpredictability of the future, the possibility of an extinction-level event cannot be completely ruled out. The issue with Spash's standpoint lies in his exclusive focus on the uncertainty and dangers associated with capitalist growth while remaining silent about the uncertainty and dangers involved in overthrowing capitalism on a global scale.⁸

(iii) *Pluralism*. The Austrian School is a good illustration of ethical pluralism. Mises (1953) embraced rational utilitarianism, Hayek (1960) adopted a quasi-irrationalist evolutionist perspective, and Rothbard (1982a) advocated for natural rights. These differences in values may be inevitable and are not really an inconvenience between scientists primarily focused on

⁷ For instance, economic growth is the result of creative destruction, which itself follows from capitalists searching for profit and reallocating their investment from low to high profit rate firms and branches. However, growth cannot be reduced to the fact that capitalists act to earn money.

⁸ As one of the referees aptly puts it, for Spash it is uncertainty for thee but not for me.

studying objective phenomena. However, value pluralism becomes more problematic when it leads to disagreements among individuals involved in making environmental decisions within a political process. Spash proposes the use of “disaggregated multi-criteria analysis and multi-criteria mapping” as a means to solve this difficulty, a method that has been the subject of a number of scientific studies he references. While this approach holds promise in theory, in practice, it may prove time-consuming and ultimately fail to provide a satisfactory solution. Regarding methodological pluralism, Spash essentially rejects the mathematical and instrumentalist methods of orthodox economics. The Austrian School shares this critique (for a nuanced viewpoint, see Linsbichler 2023). As far as theoretical methodology is concerned, however, this school unequivocally adopts a monist stance, advocating for a single method–methodological individualism.

(iv) *Interdisciplinarity*. Spash’s support of interdisciplinarity appears as a mere statement of intent. He almost never references sociologists, anthropologists, or political scientists. In his (2013) paper he briefly mentions Habermas, one of the few instances where he refers to a sociologist.

In conclusion, let us say that presenting a scientific paradigm through abstract characteristics is not very effective. It is much more fruitful first to provide concrete examples of significant studies that highlight the nature, relevance, and validity of the paradigm—and second to uncover their methodological foundations. In the case of the Austrian School, Menger (1976 [1871]) initially developed the economic theories of goods, value, and exchange, before he could elucidate their methodological premises a few years later (1985 [1883]). In other words, Spash’s approach goes backwards as methodology should be delineated *after* theory. The crucial questions that should be addressed are: What are the major studies and theories in “social ecological economics”? What do they look like? And most importantly, what is their scientific contribution? These questions will be revisited at the end of this paper.

2. An empirical review of Spash’s arguments against economic growth

As a radical ecological economist, Spash strongly opposes economic (i.e., capitalist) growth. This section reviews his main critiques of the growth process, mainly drawn from a 2007 paper.

We are well aware that these topics could be much more extensively explored, each one deserving its own comprehensive paper or more. However, our objective here is just to respond to Spash's arguments at the same level of generality that he adopts, without delving too deeply into each subject and instead focusing on the most basic facts. Being centered on the empirical side of the issue, this section has a more distant relationship with the Austrian School. It is nonetheless justified on account of the great significance of the subject matter.

2.1 Growth is not sustainable due to the exhaustion of natural resources

As far as growth is concerned, environmentalists have long raised concerns about the finite nature of natural resources and their eventual exhaustion (Georgescu-Roegen 1971, 1975, Meadows et al. 1972). Spash (2007) refers to these well-known works of the early 1970s, stating that “we cannot expect traditional economies to continue ad infinitum in a finite environment (i.e. limited by energy, materials availability and assimilative capacity)” and that “exponential growth on a finite planet hits limits” (2017a).

On the contrary, Julian Simon (1996 [1981]: Chap. 3) stands in opposition to the notion of finite natural resources and famously argues that their supply is “infinite.” Here is his argument in a nutshell:

“More people, and increased income, cause resources to become more scarce in the short run. Heightened scarcity causes prices to rise. The higher prices present opportunity, and prompt inventors and entrepreneurs to search for solutions. Many fail in the search, at cost to themselves. But in a free society, solutions are eventually found. And in the long run the new developments leave us better off than if the problems had not arisen. That is, prices eventually become lower than before the increased scarcity occurred.”

Although Julian Simon does not specifically mention Hayek (1945) in this context, his statement is very reminiscent of this classic Austrian paper on the use of knowledge in society. Hayek explains how the price system effectively regulates the allocation of resources by economizing those that become scarcer, as signaled by their rising price. Simon expands on this line of reasoning by incorporating the role of “inventors” of new productive techniques into this market process. This analysis of price coordination as an ongoing adaptive process guided by

entrepreneurial discovery, is a fundamental principle of the Austrian School, contrasting with the equilibrium framework of mainstream economics (Kirzner 1997).

Simon's theory of the endogenous origin of technological progress offers an explanation for the observed long-term trend of the real price of natural resources, which is not alarming despite global population growth and increased mining activities. When Simon was writing (in the 1980s and 1990s), the evolution of the real price of natural resources was very favorable, showing a tendency to *decrease*. According to World Bank data⁹ (2023), metals and minerals (iron, copper, aluminum, steel, etc.) went from a real price index of 65.74 in 1980 to 48.05 in 2000, a substantial decrease of 27% (this index is set to 100 in 2010). However, the subsequent evolution is less favorable. From 2000 to 2019 (excluding the COVID-19 years), the real price index of metals and minerals rose from 48.05 to 78.75, a 64% increase. Although this surge is significant, it translates to an average annual growth rate of 2.6% over this period, which is still lower than the annual growth rate of the global economy (which was around 3% between 2000 and 2019¹⁰). Therefore, while the real prices of natural resources are indeed increasing, they are doing so at a slower pace compared to the overall economic growth.

Simon may have been too optimistic regarding the decline of real prices for natural resources. While this trend held true during his time, it is no longer the case. However, it is important to note that the production of natural resources, such as metals and fossil fuels, continues unabated. Just as food production (rice, wheat, etc.), it has grown steadily over the past decades.¹¹ When Spash (2017a) writes “That the resources required by the modern capital accumulating economy are becoming scarcer is a basic fact,” his concept of scarcity needs clarification, as these resources are actually being produced in increasing quantity. What occurs is simply that the real demand for these resources rises slightly faster than their supply, resulting in their gradual increase in real prices.

It is impossible for us to say who is right between the “optimistic” Simon and the “pessimistic” Spash (even though we lean much more towards Simon's perspective). Only time will tell. Georgescu-Roegen in the early 1970s would probably not have foreseen the

⁹ <http://www.worldbank.org/en/research/commodity-markets>.

¹⁰ According to the data found on the World Bank website (data.worldbank.org), the world GDP increased from \$48.35 trillion to \$84.68 trillion (in constant 2015 dollars), a 75% increase in real terms. The corresponding annual rate r over this 19-year period is $(1 + r)^{19} = 1 + 0.75$, so $r = 1.75^{(1/19)} - 1 \approx 3\%$.

¹¹ See the data compiled on the ourworldindata.com website.

continuation of a favorable trend in economic growth and reasonably priced natural resources well into the 21st century.

2.2 *Growth is a threat to the future of humanity*

According to Spash and other environmentalists, the problem with growth extends beyond its inability to be sustained due to resource depletion and climate disruption. They argue that growth poses a direct threat to the lives of future generations: “Killing future people and destabilising the Earth’s climatic system for too little economic gain in the present is a poor resource allocation decision” (Spash and Gattringer 2017). As Georgescu-Roegen (1971: 304) wrote half a century ago:

“The conclusion is straightforward. If we stampede over details, we can say that every baby born now means one human life less in the future. But also every Cadillac produced at any time means fewer lives in the future... Population pressure and technological progress bring *ceteris paribus* the carrier of the human species nearer to its end only because both factors cause a speedier decumulation of its dowry.”¹²

In his review and harsh criticism of Simon’s *The Ultimate Resource*, Daly (1982) articulates the dilemma clearly:

“I do agree that, other things equal, more human lives, and more lives of other species, are better than fewer. And I think that most of my fellow neomalthusians would agree that 10 billion people are better than 2 billion—as long as the 10 billion are not all alive at the same time! This is the crucial point: neomalthusian policies seek to maximize the cumulative total of lives ever to be lived over time, at a sufficient per-capita standard for a good life. Simon wants to maximize the number of people simultaneously alive—and, impossibly, to maximize per-capita consumption at the same time.”

Daly’s implication is that growth, in the long term, inevitably leads to a reduction in the global human population, making it essentially lethal. He argues that through growth, we are *trading lives at a deficit*, exchanging (so to speak) additional lives now against more lives lost in

¹² It must have been incredibly depressing for a Georgescu-Roegen to think of dead people every time he saw a car drive by in the street. Nowadays, this kind of anxiety is unfortunately quite widespread among children and young people in relation to climate change, according to the worrying results of the global survey of Hickman et al. (2021).

the future. Growth becomes a sacrificial process that ultimately destroys more lives than it generates in the present and near future. In order to trade lives at a deficit, multiple billions would have to be lost¹³ in the future successive human generations due to the current growth. This would imply an almost unimaginable collapse of the capacity of Earth to sustain human and non-human life. Radical environmentalists nevertheless believe that such a global catastrophe is likely to occur, which is why they want to act now and decisively against capitalist growth. On the other hand, if Simon (1996 [1981]) is correct and technology and the market process offer viable solutions, implementing restrictive anti-growth policies would become the actual catastrophe. Not only would rich countries be greatly impoverished, but developing nations would also lose the opportunity to prosper and advance.

2.3 Growth and GDP are not indicators of material well-being

The GDP is usually criticized in textbooks for its failure to account for the quality of the environment (see for instance Mankiw 2010). Spash (2007) offers a more nuanced critique. He explains that a portion of capitalist growth just represents the production of the tools used to prevent, mitigate or repair the damage caused by growth itself (while he is not very specific in these paragraphs, one can assume he is referring to issues such as resources scarcity, soil degradation, climate-related disasters, species extinction, etc.). This part of growth does not enhance the well-being of the population but instead diverts resources away from fulfilling genuine needs. If we understand him correctly, it is as if growth creates a hole in the metaphorical “boat” on which humanity stands, and then produces the bucket to remove the water pouring in. Producing the bucket contributes to economic growth and increases the GDP. However, without capitalist growth, there would be no hole in the boat, no need for a bucket, and production could therefore be utilized for something truly beneficial. As Spash writes (2007: 711):

“that an economy can grow through disaster prevention shows that GDP measures activity not well-being, and that the market system can feed-off itself. We are supposed to plaudit GDP growth due to spending billions on controlling and adapting to GHG emissions. The opportunities for making money to prevent disaster are large.”

¹³ These lives would be lost, not from death but from not being born at all because Earth could just not sustain them.

In his view, capitalist growth is artificially bolstered by what he calls “defensive expenditures,” which are aimed at addressing the problems arising from growth itself. However, it is important to consider how these “defensive expenditures” compare to the wealth generated by growth. Drawing upon the metaphor of the boat, hole, and bucket, if growth brings substantial benefits (which it does), if the hole is relatively small, and if the bucket is quite inexpensive to produce, *then growth is clearly a good thing*.¹⁴

How much is actually spent on mitigation or adaptation measures, and how does it compare to the overall economy? Spash (2007) provides the figure of 1.2% of GDP in the U.S. for the damages of “extreme climatic events.” Some data are now available that shed light on the global trend of losses incurred due to climate disasters as a percentage of world GDP from 1990 to 2017 (Pielke 2018). These losses range between 0.1% and 0.5% of GDP, depending on the year. Surprisingly, the data reveal *a slight decrease* in these losses over this period. Now, most of these disasters have a purely natural origin and would have taken place anyway, regardless of the atmospheric CO₂ levels or other human-induced environmental changes. The “defensive expenditures,” when evaluated in terms of the cost incurred by growth-related damages to ecosystems, represent only a small fraction of these already tiny percentages.

As soon as things are put into perspective with these calculations and data, we have to recognize that Spash’s “defensive expenditures,” even if they do exist, are *very* small in comparison to the overall economy lifted by capitalist growth (at least in rich countries). Such expenditures do not warrant forgoing the benefits of economic growth. Admittedly, the mitigation and adaptation measures against environmental disruption are not directly taken into account in the statistics of global losses mentioned above and could be quite expensive (including renewable energy, coastline protection, forest management, insulation of buildings, and improvement of mass transit, among others). Some of these measures are useful irrespective of human-caused climate change or environmental disruptions, so only a portion of their cost should be accounted as “defensive” in Spash’s sense.

2.4 Growth does not promote happiness

¹⁴ For a defense of the idea that in spite of the criticism that this economic aggregate receives, “GDP is a good measure for welfare,” see Lomborg (2020: 2-3).

Spash (2007) argues that “economic growth is no panacea and does not continually increase happiness...” He refers here to a famous study by Easterlin (1974) that demonstrates the absence of a significant relationship between growth and happiness. This result is known as the “paradox of Easterlin,” which suggests that although within a country wealthier individuals are happier than their poorer counterparts, the overall happiness of the country does not increase on average as it becomes wealthier through economic growth. However, more recent data have prompted a reassessment of this result. In their well-documented and systematic report on the topic of happiness in an international context, Helliwell et al. (2012: 65) observe that:

“On this matter, one can make no general statement. As we have seen there are some countries like the U.S. and West Germany that have grown over long periods of time but have not become happier. On the other hand there are other countries where income growth has gone hand in hand with increases in happiness.”

Although they acknowledge the complexities of the issue, they are confident enough to assert that “In a typical country, economic growth improves happiness, other things equal” (2012: 66). Of course, other things are not equal. There are “external” factors that diminish happiness,¹⁵ such as the loss of social trust, lack of community cohesion, loss of job significance, unemployment, insecurity, and more. These elements can outweigh the benefits of growth and lead to a decrease in a country’s overall happiness despite economic progress. It should be noted that these adverse elements may be partly linked to the growth process itself (for instance, loneliness and longevity).

Easterlin himself has never backed down and maintains, contrary to Helliwell et al. (2012), that growth has no long-term effect on happiness (Easterlin 2014). However, it appears to us that Easterlin makes an *empirical* claim while Helliwell et al. make a *theoretical* claim (with their use of the caveat “other things equal”). If indeed their statements fall into different categories, then it can be simultaneously true that growth does (theoretically, everything else equal) and does not (empirically, as an overall statistical correlation) bring happiness.

While it may be true that growth alone does not guarantee increased happiness, this fact alone should not be sufficient to discourage its pursuit. Growth encompasses numerous aspects of well-

¹⁵ There are also “personal” factors listed by the authors, such as mental and physical health, family experience, education, gender, and age.

being, such as health, work opportunities, and leisure, all of which contribute significantly to overall satisfaction. This explains why affluent nations tend to rank higher in happiness while impoverished nations rank lower (as demonstrated by Helliwell et al. 2012, where Denmark and other Nordic countries occupy the top positions while Togo and other African countries rank at the bottom). Moreover, even if we assume that growth does not directly lead to happiness, it is likely that the abandonment of growth would result in *unhappiness*. One of the reasons why growth fails to increase happiness is that individuals become accustomed to their higher level of material well-being and eventually return to their baseline level of subjective satisfaction. If people were compelled to give up certain opportunities they previously enjoyed due to stricter environmental regulations, it is highly probable that they would feel discontented.

The concept of happiness is rarely discussed in the Austrian School.¹⁶ This is primarily because this school is fundamentally praxeological, focusing on human action and its means-ends logic. In this framework, Mises (1998 [1949]: 14) uses “happiness” in a purely formal sense, considering it synonymous with “satisfaction” and “utility.” People act because they experience uneasiness and believe that by acting in a certain way they will be “happier.” Mises writes that human action can be defined “as the striving for happiness.” However, this understanding differs significantly from the concept of happiness used in modern-day happiness research surveys, where respondents are asked questions such as “Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?” Answering this kind of question reveals a general state of mind that is largely disconnected from everyday or typical actions and cannot really be used to explain economic phenomena. On the subject of political philosophy, Austrians are not primarily concerned with establishing an ethical system that fosters happiness but rather one that promotes liberty.¹⁷ From their perspective, the question of whether there exists a positive or constant relationship between economic growth and happiness holds little relevance.

2.5 Growth does not reduce world poverty

¹⁶ For one of the very few synthetic papers written on this topic by Austrian economists, see Coyne and Boettke (2006).

¹⁷ Facchini (2022) argues that the policies that could be implemented through public spending to promote happiness (as understood in happiness surveys) are contradictory with the ideal of a free society and would likely be inefficient anyway.

In a more recent paper, Spash and Gattringer (2017) oppose the idea that growth has a “trickle down effect” and can solve the problem of global poverty:

“Thus, the linking of growth to poverty alleviation has seen a revival (GCEC 2014), despite the infamous trickle down effect having been discredited (OECD 2011). Recognition that the current economic system benefits a minority is nothing new (e.g., the writings of Gramsci in the 1920s and 30s, see Hoare and Smith 1971), but consistently the opposite is claimed.”

Their reference to the 2011 OECD report is misleading. Here is what this report actually says:

“A sustained period of strong economic growth has allowed emerging economies to lift millions of people out of absolute poverty. But the benefits of strong economic growth have not been evenly distributed and high levels of income inequality have risen further.”

This OECD report clearly and explicitly links “growth to poverty alleviation.” In light of this context, it is difficult to make sense of Spash and Gattringer’s reference, as their claim contradicts what the report actually states. According to the World Bank (2022), extreme poverty (below \$2.15 a day) has declined from nearly 40% in 1990 to less than 9% in 2019 (an unfortunate rebound above 9% has taken place in 2020 due to COVID). From an Austrian viewpoint, this positive outcome is not due to redistribution from rich to poor countries but rather to economic development, i.e. to capitalism, production, and growth.¹⁸ Finally, the assertion that “the current economic system benefits a minority” is highly questionable, considering the very favorable trends observed in global poverty reduction, life expectancy, infant mortality rates, literacy rates, and other indicators over the past three to four decades.¹⁹

In conclusion, Spash’s multi-pronged attack against economic growth is not persuasive. Contrary to his claims, growth does not inevitably deplete natural resources, and in fact, may well remain highly beneficial rather than threatening humanity. Moreover, it serves as an

¹⁸ The poverty alleviation mainly took place in China and India, where capitalist economic systems have been implemented, less so in sub-Saharan Africa, where political instability and corruption have largely prevented the advent of capitalism (the system of private property of factors of production and of freedom of contract).

¹⁹ See these indicators on the World Bank website (<https://data.worldbank.org/indicator/>).

indicator of material well-being and may contribute to increase happiness *ceteris paribus*. Additionally, growth plays a crucial role in reducing global poverty. Nonetheless, it is worth considering that Spash's argument could potentially hold true in the event of a catastrophic future occurrence, such as a complete collapse of Earth's ecosystems caused by ongoing growth.

3. Spash's critique of the standard economic models of climate change

The climate models developed by orthodox economics play a major role in discussions about climate change, and Spash is strongly critical of them, particularly regarding the issue of the intergenerational discount rate. Advocates of the orthodox paradigm attempt to assess different "climate policies" and their consequences on global GDP (Nordhaus 1991, 1993, Stern 2007, Tol 2009). These policies are more or less severe, as indicated by the amount of tax paid per ton of CO₂ emitted ("carbon price"). This tax is not necessarily constant and can ramp up over time as the economy grows and environmental damage intensifies. As these policies initially reduce per capita GDP (because they are costly) but then increase it later on (because they mitigate environmental harm), they involve an intertemporal choice. This is where the intergenerational discount rate—Nordhaus' "pure rate of social time preference"—becomes relevant. The current value of a policy is calculated by summing the future subjective values of real consumption per capita, discounted at the intergenerational rate of time preference. Discounting allows for the determination of the present value of different mitigation scenarios, and the one with the highest present value can be deemed the "best" climate policy (Nordhaus' "optimal level of emissions reduction"). The *choice* of discount rate significantly affects the calculation of this optimum. A low rate gives greater weight to the distant future and favors "climate policies" relatively more, while a high rate prioritizes the near future and "inaction."

Spash is deeply critical of these mainstream models in all of their aspects:

- These models use the *GDP* (or the GDP per capita) and we have already seen that he holds a very negative view of this aggregate.
- These models tend to reduce future *uncertainty* to a narrow range centered around a growth trajectory, disregarding the possibility of an extinction-level event or a genuinely

catastrophic environmental breakdown. In contrast, Spash and Gattringer (2017) advocate for “the need for precaution in the face of a highly uncertain future with irreversible catastrophic scenarios.”

- The models formalize choices from a *utilitarian* and *consequentialist* perspective, which Spash rejects.
- The aggregation of all individuals and populations into a single utility function contradicts the reality of the *incommensurability of values* and overlooks the *inequality* in the distribution of wealth.
- According to Spash’s judgment, the discount rate employed in these models is excessively high (2% or above), resulting in a devaluation of future generations (Stern 2007 stands as an exception with a remarkably low rate of 0.01%²⁰).

It is not an exaggeration to say that the orthodox approach represents everything that Spash, as a radical ecological economist, totally rejects. He rejects it all the more that authors such as Nordhaus and Tol arrive, with their models, at rather optimistic conclusions. These authors tend to downplay the perils of climate change and contend that a relatively affordable policy will prevent most of the damage while safeguarding the future benefits derived from economic growth. Spash vehemently opposes this perspective.

Regarding the discount rate, Spash and Gattringer (2017) put forth two essential points. First, they argue that the choice of a level for the discount rate is not solely a scientific matter but also an *ethical* one (“Ethics is impossible to divorce from the discount rate chosen”). Second, they contend that orthodox economists disregard this ethical dimension (“Establishing what the social discount rate should be for public policy projects is highly contested within economics, but as a technical issue not an ethical one”). They are correct in their first assertion but mistaken in the second. The discount rate is an index of time preference, and since preference inherently involves value judgments, it is undeniable that choosing such a rate is an ethical decision. Assessing the relative importance of the well-being of current vs future generations undoubtedly presupposes a moral judgment.

²⁰ Nordhaus (2006) devotes most of his review of the Stern report to a critique of its choice of a very low discount rate.

However, it is incorrect to claim, as Spash does, that standard economists disregard or overlook the ethical aspect. In fact, one of the foundational mainstream texts on this topic (Arrow et al. 1995) is titled “Intertemporal Equity and Discounting” and here is its opening paragraph: “How we think of these trade-offs [across generations] involves issues of intertemporal equity. This issue is a matter of ethics and morals because it involves reaching judgments about what is fair or just.” Nordhaus (2006) distinguishes three ethical positions in relation to the discount rate: (i) intergenerational neutrality (zero discount rate), (ii) leaving as much capital to the next generation as inherited by the current one (various possible rates), and (iii) “a Rawlsian perspective that societies should maximize the economic well-being of the poorest generation” (which may involve a high discount rate if future generations are expected to be wealthier due to growth). Stern (2014) has devoted a long paper to the ethics of climate policy, analyzing a series of non-consequentialist (Kantian, Contractarian à la Rousseau or Rawls, Aristotelian) and consequentialist perspectives. Therefore, orthodox economists are fully aware that the choice of an intergenerational discount rate is an ethical matter and they have tried to justify it through the lens of various value systems.

Spash, on the other hand, does not provide a detailed exposition of his ethical position. He is content with a brief critique of consequentialism and a generic call for pluralism. When he writes that “Past economic climate change studies have equated recreational benefits with loss of life, e.g., more golfing in the USA compensates for deaths in China or India” (2007: 710), he presents a very questionable interpretation of aggregate models. Even if, in a sense, they could be interpreted that way, it is obvious that none of the authors would endorse such hyperbolic conclusions. The purpose of these models is merely to offer a broad understanding of the situation and to suggest rational (based on a cost-benefit analysis) measures that could potentially mitigate future climate change damage. Their intent is not to justify a trade-off between extra material comfort in the Western world and human lives in poor countries.

Now, from the viewpoint of the Austrian School, the critiques made by Spash to the climate change models are for the most part acceptable. These models aggregate the whole of humanity into a single “social welfare function,” a very ambitious undertaking that also requires value judgments. The maximization of a global utility function aligns with pure utilitarianism and consequentialism. In terms of political philosophy, many Austrian economists lean towards deontology and uphold natural rights theories, as advocated by Rothbard (1982b) and Block

(1998) in their works on pollution and the environment (their ethical system is considerably more developed than Spash's). Additionally, Austrian economists are not fond of quantitative and predictive models, due to the radical uncertainty inherent in complex economic systems. For instance, Murphy (2009) devotes an entire paper to a review of the various uncertainties present in Nordhaus' model, such as the relationship between GHG concentration and temperature, the amount of economic damage resulting from specific temperature increases, and the potential efficiency and benefits of a carbon tax. Simulated models can account for some of these uncertainties by running different parameter sets, delivering a range of results rather than a definitive outcome.

Despite their methodological, theoretical, and ethical shortcomings, the standard models of climate change à la Nordhaus offer valuable and relevant insights into the potential trade-offs associated with the "ultimate externality" of anthropogenic changes in atmospheric composition. Beyond the harsh—and to some extent justified—criticism of these models, what does Spash's social ecological economics bring to the table? The last section below addresses this question.

4. A critique of Spash's framework in science and policy

This section examines two key synthetic papers by Spash, providing an overview of the field (2011, 2017a). Our aim is to identify the scientific advancements associated with his "Social Ecological Economics" paradigm and explore the policy recommendations he promotes.

4.1 Where is the science?

Science aims to provide compelling explanations for perplexing phenomena within a specific realm of reality (Popper 1957). Austrian economics offers numerous examples of such scientific explanations, for instance, the theory of exchange (correctly identifying "value" as a subjective phenomenon and revealing that contrary to a long-held belief, even by brilliant thinkers throughout history, the values of two goods exchanged are not equal), the theory of price coordination (that explains how, in a market economy without centralized command, over- and under-production tend to be corrected, ensuring that supplies of the various goods align with

consumer demands), and the theory of the trade cycle (explaining the origin, nature, and recurrence of the boom-bust cycle).

Let us browse through Spash's synthetic papers in view of identifying science in the Popperian sense. His 2011 paper, titled "Social Ecological Economics: Understanding the Past to See the Future," is published in a generalist social science journal and therefore intended for a scientific but non-specialized audience. We set aside the historical part of the paper and focus on the constructive part titled "The Basis for an Heterodox Ecological Economics." In this section, Spash first argues that economics should take inspiration from biology instead of physics, so as to adequately address the issues of "complexity, levels of abstraction, appropriate units of analysis, irreversibility, non marginal and qualitative change, and non-optimizing behavior." He proceeds to criticize the obsession of modern economics with "growth and efficiency." According to him, simply transitioning "away from material and energy consumption" is insufficient. He suggests going as far as "the abandonment of hedonism" to operate "a fundamental redesign of the modus operandi of modern economic systems." The paper concludes with the topic of institutions and proposes the implementation of "a more inclusive participatory approach to governance that would allow deeper environmental values than those prevalent in daily Western life to come to the fore." From a purely scientific viewpoint, this paper is clearly disappointing. No explanation of important phenomena is to be found. Although Spash states that the problem is to "address society-economy-environment interactions," what he does is just to address the way these topics *should be addressed*. Methodology is valuable, but science would be better.

In his recent synthetic paper (2017a), which serves as the introductory chapter to the *Routledge Handbook of Ecological Economics*, Spash begins by denouncing orthodox economics for its unrealism, its utter inability to effectively address the nature-society issue and its unfortunate dominance on ecological economics.²¹ He then offers an overview of the transition from traditional self-sufficient societies of the past to the modern societies that emerged from the industrial revolution. The advent of modernity, characterized by the use of fossil fuels and mechanization in production and transportation, significantly transformed "all social ecological interactions." The previous reliance on the direct and indirect utilization of "the

²¹ At least a part of his criticism is unfair and fights a caricature of orthodox economics, but it is not our role here to defend mainstream economics against these attacks.

solar flow of radiant energy” was replaced by a dependence on and “massive exploitation” of “stocks of concentrated minerals.” Spash notes that the depletion of these mineral resources necessitates the search for new deposits and substitutes, which in turn disrupts “existing structures and their functions with unknown consequences.” While this innovative process was viewed positively by Simon (1996 [1981]), Spash considers it highly dangerous and also deceptive, because we will see “the full scale of the disaster only after the event, when action is too late.” He portrays the current system as a “continuous battle against the instability it creates through the destruction of that upon which it depends.” However, he fails to mention in this context that this capitalist process of creative destruction has elevated living standards to levels that would have been unimaginable two centuries ago. He downplays this progress as mere “materialism” and leaves it at that.

Spash proceeds to rant against cars (“macho car culture”) and new technologies (“Why do people have mobile phones? Because other people have mobile phones and now you are expected to have one to be ‘normal’”). His bias is obvious as he only focuses on the negative aspects of these innovations. Furthermore, he denounces the “exploitation” by modern economies of women in their traditional role, of poor countries and of non-humans.²² The paper ends with a call to activism and with Spash’s usual broad methodological guidelines emphasizing critical realism and pluralism. Once again, in terms of theoretical science in the Popperian sense, the paper falls short. It should be noted that we do not assert the absence of any scientific aspects within Spash’s extensive body of work. But why are they not clearly on display in his general presentations? After reading two of Spash’s synthetic papers (and we could also include his 1995 paper), we still have a hard time figuring out the scientific achievements of “social ecological economics.”

4.2 What are the policy recommendations?

²² Spash claims that “the current economic system is wiping out species at an unprecedented rate.” We take this opportunity to note that he rarely, if ever, gives scientific references to support his claims of environmental damages. In this particular example, he refers to one of his own papers, but we observe that the bibliography of said paper lacks any reference from prominent biological journals on the topic of species extinction. Spash seems to consider the environmental data and damages so obvious that he does not even need to cite the relevant literature from specialized scientific sources.

Spash clearly advocates for the elimination of capitalism, which he associates with the destruction of the environment, pollution, poverty, exploitation, inequality, waste, resource wars, authoritarianism, corporate greed, and the manipulation of consumers.²³ He lacks clarity, on the other hand, regarding the alternative system that he wants to implement in order to adequately solve all of these problems. He mentions pre-capitalist societies to argue that other kinds of economic systems can be established:

“before capitalism there were other types of economic systems, other economies. Once both the possibility of and need for alternatives are accepted then questions arise as to the varieties of social structure, means of social provisioning and waste disposal, and relationships with nature and biophysical reality” (Spash and Smith 2019).

Indeed, these questions arise, but what are the answers? It is difficult to argue that the older systems would be superior to the current one. However, Spash seems to favor a rural and agrarian (non-mechanized?) society:

“That there are other forms of social economy is both an historical fact and present reality. Yet these alternatives are dismissed by equating economic growth with development and technology with progress. Under this paradigm the rural is derided in favour of the urban... Urbanisation is a policy of the growth economy that targets the destruction of rural livelihoods in the drive for mechanised industrial agriculture and the creation of an urban underclass to work in the unskilled jobs of factories and to carry out undesirable reproductive tasks” (Spash 2017a).

In a rural society without modern agricultural equipment, labor productivity would collapse and this would in turn lead to a drastic reduction in population. This outcome likely suits him, but he does not specify any desired global population figure. In any case, he frankly admits:

“I have not attempted to describe the constituents of an alternative social ecological economy, that is work for the future... humanity would do better to create an economic system that is smaller by design, not disaster. A social economy that reproduces itself in harmony with Nature rather than through domination over it. That is the job ahead.” (2017a).

²³ All of these claims are totally rejected by the Austrian School. Most of them are already refuted by Mises (1998 [1949]). Many other studies could be mentioned but we do not want to overcrowd the list of references of this paper.

Spash wants to get rid of capitalism, but he has no concrete plan for a replacement. Let us assume, for the sake of the argument, that he advocates for a society composed of small and scattered rural communities with a minimal environmental footprint (which seems to be the case). A rational discussion would require (i) an evaluation of the likelihood of a devastating global climate catastrophe, (ii) a thoughtful analysis of the nature of this potential catastrophe and its impact on labor productivity, (iii) acknowledging the possibility of developing new capitalist techniques to combat the various forms of pollution, and (iv) a thorough assessment of the pros and cons of capitalism (+ anthropogenic environmental disruption) versus scattered rural communities (+ the natural climate catastrophes).

Instead of such an analysis, Spash presents a metaphor involving a bridge and a boat used to cross a river (2017a: 7). The bridge (capitalism) is collapsing and a failed system anyway, the boat (rural communities?) has worked in the past so it is the tried-and-tested solution we should pick. Spash is almost certain of an impending catastrophe but he does not bother to describe it in detail. He refuses to place “faith” in what he calls “a totally romantic utopia of modernist techno-optimism” and disregards the tremendous benefits of capitalism. He also neglects the potentially low (or even dire) living standards prevailing in an agrarian society that subsists “in harmony with Nature.” As a result, his policy discussion comes across not only as deeply biased but as *barely rational*, especially when compared to the in-depth institutional comparative analyses found in the Austrian School (on topics such as free market vs interventionism vs collectivism, commodity money vs fiduciary media vs concurrent currencies, money warehouses vs free banking vs central bank, free trade vs protectionism, etc.).

5. Conclusion

Spash is undeniably an honest intellectual, strongly committed to his moral values, and very hard at work in his field, publishing in the last thirty years a stream of four or five papers annually. On the positive side, he addresses very important topics and does not hesitate to question orthodox economic principles and values. In our opinion, however, the shortcomings much more than offset these merits. His work primarily consists of criticizing the standard economic approach and developing methodological principles that contradict one by one the orthodox assumptions,

but it lacks substantial scientific content. While his critique of neoclassical climate models holds some validity, his condemnation of economic growth falls short and would only be justified provided that an environmental disaster of an almost unimaginable scale and ascribed to growth occurred in the future. Moreover, his synthetic papers fail to provide examples of genuine scientific theories—in the sense of satisfactory explanations of perplexing phenomena—developed within his methodological framework. We still have no clue about the substantive scientific contributions and accomplishments of his “social ecological economics.” Therefore, his selection of methodological principles appears more as a strategic move against standard economics rather than as a genuine effort to choose tools for theory development. Spash’s core message is that a radical change is needed to avert potentially catastrophic consequences of environmental damages caused by capitalism and its pursuit of economic growth. However, he offers little insight into the system that should replace capitalism—the catallactic order that proved able to lift a rapidly increasing population to unprecedented levels of material well-being. He strongly believes that a dreadful environmental danger lies ahead, but does not discuss in any detail its nature and likelihood based on global climate data. Consequently, his call for a radical institutional revolution is not justified on rational grounds.

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