

Climate-relevant implications of the hegemonialisation of a socio-ecologically ignorant economics maxim within university teaching

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1. Introduction

Last week, for instance, I went hiking in the Alps and saw glaciers and then there were pictures there of how it looked a hundred years ago and how giant the glacier was back then and now there is only this small tip of the mountain covered by the glacier and that immediately got me thinking: what, now already? How sad, that it looks like this today already. But if I ever go to the mountains with potential children for trekking, I will have to tell them that back when I was younger you could see the glacier here and now there is nothing left of it at all any more. I definitely have thoughts like this and I do worry about this.

Excerpt from one of my interviews with economics graduates¹

This summer was the hottest ever recorded, not only world-wide but also by far (Copernicus, EU climate change services in SZ, 6.9.2023²). Climate change is progressing in what Ingolfur Blühdorn sees as an “apparent lock-in of contemporary consumer societies into the *logic of unsustainability* (2007, 2013, 2014, 2020, cited in 2022, orig. emph.). This paper argues, firstly, that economic decisions play a pivotal role in this current state of sustained unsustainability. Secondly, the type of economic thinking currently applied at universities in both research and teaching is almost entirely blind to this defining issue of our time. Consequently and thirdly, young economics graduates are being released into this world with a fundamentally unreflected, narrow, yet totally naturalised mainstream economic mindset that renders it increasingly less likely that modern consumer societies will be equipped to escape their current state of sustained unsustainability (Blühdorn, 2020).

Accordingly, in 2019, renowned economists Andrew Oswald and Nicholas Stern published a plea for their discipline to finally engage properly with the topic of climate change. They pointed to the most influential academic journals within their field hardly concerning themselves with it at all – out of approximately 77.000 journal articles³ analysed, only 57 had even mentioned climate change. “As one example, the Quarterly Journal of Economics, which is currently the most-cited journal in the field of Economics, has never published an article on climate change (p. 1 check!). In their view, with its silence in this respect, their discipline was failing human civilisation.

Peer-review: **Economic Gatekeeping**, Theorien, die den Reviewers widersprechen haben keine Chance, Phänomen in Econ am stärksten

Diskreditiert als ideologisch verzerrt oder unwissenschaftlich

Leitner Uni Linz: 49 000 Journal Artikel 30 Journals 1990 – 2018, jeder 4. Artikel produziert von 20 hochrenommierten Wirtschaftsunis, Konzentration problematisch, soziale Faktoren/Netzwerke + Traditionen ausschlaggebend

¹ All translations of interview statements and citations from German into English were carried out by the author.

² [https://www.sueddeutsche.de/wissen/klima-eu-klimawandeldienst-sommer-2023-war-so-heiss-wie-nie-dpa.urn-newsml-dpa-com-20090101-230906-99-91944#:~:text=Reading%20\(dpa\)%20%2D%20Der%20Sommer,Monate%20Juni%20bis%20August%20mit.](https://www.sueddeutsche.de/wissen/klima-eu-klimawandeldienst-sommer-2023-war-so-heiss-wie-nie-dpa.urn-newsml-dpa-com-20090101-230906-99-91944#:~:text=Reading%20(dpa)%20%2D%20Der%20Sommer,Monate%20Juni%20bis%20August%20mit.)

³ That were chosen as ‚general‘ economics journals

30 Autor:innen, die am meisten in diesen Journals publizieren, davon nur 1 Frau

This pounding lack of pluralism in economic research is mirrored in teaching. In May 2020, the network for pluralist economics, that had emerged out of protests to this end at the University of Sorbonne in 2007, published a comprehensive position paper in which it demands the questioning of mainstream or orthodox (neoclassical) economic thinking that “focuses on the self-healing properties of markets, growth and efficiency and has dominated economic training, research and policy since the 1980s” (Netzwerk für Plurale Ökonomik, 2020, p. 4). Other axiomatic characteristics of this type of thinking include the conception of the archetypical homo economicus who is self-interested, rational and utility maximising, the invisible hand of the free market that generally steers towards equilibrium, efficiency of the price mechanism, and the principles of scarcity, marginal utility and perfect information.

Just how mechanistic this type of thinking is can be seen on “the armchair economist” Steven Landsburg’s proclamation that “most of economics can be summarized in four words: 'people respond to incentives.' The rest is commentary” (2007). Yet, “neoclassical economics as the dominant current of economics carries a far-reaching interpretative power (Deutungsmacht) that is reflected in the visibility of its representatives in the media and the valuation of the advice given by them. Its contents thus resonate far beyond academic activity and shape popular economic imaginaries (cf. Bourdieu, 1998, p. 223; Sparsam, 2019, p. 31, both cited in Kungl, 2021, p. 35). Mainstream economics’ methodological naïveté mirrors this theoretical narrowness: individual people or households are the only unit of analysis that orthodox economic theory can fathom, leaving anything social having to be demoted to the inferior status of external add-on – what a starting point for a *social science*!

According to the network for pluralist economics

in economic teaching, social progress is almost exclusively defined as productivity, efficiency and growth – not as expansion of individual capacities, fairness and an economy in balance with nature. This collective negligence has resulted in an almost complete inability to coherently think and model economic systems without the necessity of positive GDP growth – even though now, in the climate crisis, we need visions for resource conserving and sustainable economic systems more than ever.

network for pluralist economics, 2020, p. 15.

Accordingly, economic theory fails us most profoundly on two accounts – namely by treating the ecological and the social as mere externalities:

since it was founded in the 18th century, economics (...) has shaped the ideas of those involved and those with political responsibility as to what is to be regarded or evaluated as economic: (...) the conviction that the greatest human happiness lies in the maximum material endowment that can be achieved through technological progress and permanent economic growth – based on the fact that the former mortal sin of greed has been reconfigured into a useful economic interest

Hirschman 1980, quoted by Schneidewind et al., 2016, p.31.

To take up just one of these points, the lacking speed of implementation of renewable energies, for instance, shows that technological progress alone is far from a sure-fire success or panacea for fairer conditions or an apt treatment of climate change, because the development towards a more sustainable society "depends significantly on the broader political and cultural context in which it takes place" (Kallis et al., 2018, p.14).

Fairer – distribution – IE – social - Polanyi

By focusing on individual profit maximisation only, modern *consumer theory* completely ignores the fact that interpersonal relationships and moral aspects are essential for a fulfilling life (cf. Ikerd, 2005, p. 27, italics in original). “Altruism, ethics, morality, sympathy, empathy, friendship and love have all been summed up in the *consumer's preference structure*, which is accepted as predetermined or given (...). Society and nature are treated only as *externalities* influencing preferences, but outside of economic decision-making” (ibid.). As a result, mainstream economists have tried to salvage their theories by simply declaring collective decision dilemmas such as the notorious *tragedy of the commons* as anomalies. Efforts have been made to explain what ultimately has to remain inexplicable within the framework of this logic. In the words of behavioural economist Richard Thaler, neoclassical economic theorists speak of such anomalous behaviour when the following facts exist: “an empirical result qualifies as an anomaly, if it is difficult to *rationalize*, or if implausible assumptions are necessary to explain it within the paradigm” (1988, p. 195). Here, the subdiscipline of behavioural economics emerged when it was established that human beings act entirely irrationally not only often but, in fact, all the time, as only a small proportion of our thinking underlies the conscious control of our brain’s processing: “This roiling mass of nerve volleys prepare the body for action in such a way that intentions or decisions are made before the conscious self is even aware of them (Thrift, 2008, p.7)”. Accordingly, Verplanken and Wood, have found that “approximately 45% of respondents’ everyday actions were habits” (2006, p. 100) in the sense that they were not cognitively reflected.

The behavioural economics perspective thus acknowledges the severe limitations of preference-based rationality, e.g. impulsiveness, limited willpower, social norms and context (cf. e.g., Matjasko et al. 2016, p.13) by bundling them within different so-called biases that supposedly can be corrected by such measures like employing the magic of *nudges*. This strand of economic theory “integrates psychological matters and economic policy analyses and often includes legal considerations. But interdisciplinary cooperation generally remains superficial, true integration does not take place” (Netzwerk für Plurale Ökonomik, 2020, p. 20). At the end of the day, behavioural economics developed as a desperate attempt to salvage economic theories resting on the rationality paradigm – yet it may be time to question the underlying logic itself instead of labelling as an anomaly anything that does not fit and tweaking the initial theory in all sorts of directions.

Taking this pounding lack of pluralism in economic research and teaching pointed out by the network of pluralist economics as point of departure, **the present study investigates whether economic theory has made any progress when it comes to the question of sustainability in recent years⁴**. Given the much increased prominence of the topic of climate change and sustainability in public debates since the beginning of the *Fridays for Future movement* in 2019 and its arguable resurgence through the activists of the *Letzte Generation* after it had been crowded out of debates, at least to some extent, by the global pandemic and war in the Ukraine, **the paper asks whether these wider societal developments have made an impact on the state of pluralism in economic teaching problematised above**. It therefore asks whether economic theory has increased its engagement with climate change and if so, what its suggested approaches are. In the past, there has been some engagement with the lack of economic *research* when it comes to questions of sustainability, yet this paper focuses, in particular, on economic *teaching* as “surely for those who wish to achieve a fairer society, hope for the future must lie education and the communication of ideas” (Clarke & Mearman, 2003). Thus, five (initial) semi-structured qualitative interviews with university students and -teachers were held in the summer of 2023 to investigate how pluralistic economic teaching in tertiary education has become in recent years, given these wider societal dynamics.

⁴ Especially since the publication of their position paper in 2020 and Oswald’ and Stern’s plea in 2019.

The paper focuses on three aspects in particular: The next section is concerned with the theoretical underpinnings of the study. I first (2.1) consider the influence of the subdiscipline of ecological economics on economic teaching and the resulting prospects for economics graduates being better equipped for dealing with climate change in the future. Section 2.2 then asks to what extent the growth paradigm is currently being questioned in economic teaching. In section 2.3 I consider whether there is now a new “green spirit of capitalism” to be found in economic teaching like Gregor Kungl (2021) has suggested recently. Section 3 delineates my methodological procedure, section 4 presents my empirical findings, section 5 discusses their implications and section 6 concludes my argument.

2. Theoretical considerations

In 2018, economist William Nordhaus won the Nobel prize for economics with his model that, for the first time in economic theory, managed to take climate change into account. **Now, what does this tell us about the fundamental economic blindness when it comes to climate change that has been criticised in this paper so far? Does this show that economic theory is becoming more inclusive and equipped to deal with the defining societal challenges of this day?** Nordhaus has indeed internalised the ecological costs of climate change that had, along with social factors, up to that point notoriously been degraded to the status of external add-ons (as pointed towards above). He did however do so, essentially, in the form of a cost-benefit analysis where a certain monetary value is assigned to the risks or damages caused by climate change and weighted against the predicted monetary cost of acting on climate change now. With this calculation, Nordhaus arrives at an optimal level of global warming between 3 and 4 degrees Celsius (cf. Ö1-Beitrag). Oh dear. It seems more than questionable that society will be able to escape its current state of sustained unsustainability on the basis of such a conception. Obviously, the sort of tipping points that are now well established by climate science (Ref.) are not considered here. Not to mention that “[e]cological tipping points are complemented by *social* tipping points threatening societal coherence and peace and by *political* tipping points unhinging the institutions and order of liberal democracy (e.g., Lenton et al, 2008; Blühdorn, 2020, Stadelmann-Steffen et al., 2021, cit. in Blühdorn, 2022, orig. emph.) Accordingly, Nordhaus’ model and calculations have now been refuted by his colleagues (Ref.). Therefore, if the fact that an economist won the Nobel Prize for his work on climate change was reason to hope in 2018 that progress was being made, this is clearly no longer the case. From this follows that considering social and ecological aspects, but at the same time deeming them either *external* or conceptualising them in terms of monetary value only, economic theorists have attempted to both save their theories and satisfy their critics.

2.1 Ecological Economics

Yet perhaps the discipline of Ecological Economics has better answers, as it explicitly goes beyond precisely such cost-benefit analyses? It also proclaims to go further than former environmental economic approaches that, according to the network for pluralist economics, do fall back on the findings of climate science but only embed them into a conventional neo-classical framework that has led to the assumption of *substitutability* of nature and consequently grave (long-term) environmental damages. By contrast, the heterodox approach of ecological economics understands itself explicitly as interdisciplinary (Kaufmann & Cleveland, 1995) and does so not only theoretically but also methodologically. Take Kate Raworth’s doughnut economics as an idea within ecological economics (cf. Dale, 2022): She bemoans that “mainstream economics is still taught today with scant attention paid to the living planet that supports us and the blazing star whose energy we depend upon. It relegates ecological stresses such as climate change (...) to the periphery of economic thought, until they become so severe that their damaging economic impacts demand attention” (2017, p. find!). Consequently, she suggests a different understanding of the economy that is embedded “within society and within nature, and powered by the sun” (ibid.). Thus, this study explores to what extent such alternative ideas are being suggested to university students when

studying economics – or in other words: **to what extent does ecological economics feature in current economic teaching?**

Ecol econ and work time reduction

2.2 Degrowth

You cannot speak about climate change and economic theory without considering economic growth. Mainstream economics is principally based on economic growth and economic growth brings, qua definition, a continuously increasing usage of resources. In degrowth theories, degrowth is therefore understood „an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term” (Schneider et al., 2010, p. 511). Thus, secondly, this paper asks **to what extent such ideas about growth reduction feature in economic teaching, given the ubiquitously reported uneasiness of young people about the implications of climate change for their lives.** The paradigm’s direct relevance for climate change is obvious, thus, the degrowth movement has always understood itself as reaction to the problematic of climate change in the context of the global financial crisis of 2008 (vgl. Schneider et al., 2010, p. 512). At the first international conference in the same year, economic degrowth was thus already explicitly understood as “reduction of the collective capacity to extract and use resources” (ibid.).

Here, economic theory includes the application of the Kuznets curve to ecological questions: ecological strain increases at first with economic growth, in the long term then relationship is however assumed to reverse due to productivity increases, for instance through technological innovation (e.g., Andreoni & Levinson, 2001). However, as Barbara Muraca (2012, p. 540f.) shows, this only holds true for very few exceptions and also often only appears as such because environmental damages are exported into other countries with lower environmental or climate standards. We thus see that „as evidence suggests, the expected decoupling between resource impact and economic growth is not occurring on an absolute scale” (ebd., p. 541). This is not least due to now widely known rebound effects that even result in an increase of resource use despite efficiency increases: “Efficiency basically creates revenue that can be spent on the same (primary rebound) or other commodities (secondary rebound)” (Schneider, 2008, p. 29).

As long as continued economic growth increases the industries’ exploitative capacities (infrastructure, financial deregulation, investing in extractive technologies, advertising and the creation of new desires to satisfy, acceleration and so on), even ‘green’ investments such as climate taxes are not going to lead to substantive ecological improvement (Muraca, 2012, p. 541). And political agents questioning growth easily risk their own political suicide: „None of the important economic actors, whether government leaders or private sector executives, has an incentive compatible with a *no growth* policy” (Ayres, 2008).

Thus, most (economic) scientists prefer to occupy themselves with political and technological solutions that promise *sustainable* growth instead of questioning growth per se (Kallis et al., 2018, p. 18). Yet even theories that rest upon such ‘green growth’ remain deficient (vgl. ebd., p. 3 + p. 5), as there simply does not exist any form of production or consumption that operates ecologically neutral and thus without implications for the climate – growth, no matter which type, cannot be decoupled from its ecological impacts (vgl. Jackson, 2009, p. 67ff; Paech, 2018, p. 438). Hueting and D’Alessandro thus call green growth an oxymoron as dematerialised activities still use resources and in any case only represent a miniscule fraction of GDP (Hueting & D’Alessandro et al., 2010, zit. n. Schneider et al., 2010, p. 516). „Besides, cap and trade approaches extend the action sphere of markets and monetary valuation which stands in direct contrast to the premise of degrowth, namely to reduce commodification and the influence of market economics in order to fundamentally resocialise human connection and values” (Schneider et al., 2010, p. 514).

In their update to „the limits of growth“ 30 years later, Meadows et al. (2012, zit. n. ebd.) thus contend that the experience of past decades has shown that environmental destruction stands in close connection to current growth rates, not even to mention that increased growth has not shown not lead to higher contentment and quality of life (Easterlin-Paradox) and the fact that anything operating outside the market (such as care work) finds no real valuation within this logic (Schneider et al., 2010, p. 512) – two deeply problematic aspects.

In a 2020 economics blog piece, the two mainstream economists Harald Badinger and Jesus Cuaresma proclaim “in any case, no growth is no solution” and deem it paradoxical that in the wake of the pandemic “post-growth fantasies” have gained prominence not only in public- and media- but even in political debates. They write:

Even though post growth and degrowth concepts do not play even the slightest role in political reality (‘realpolitisch’; besser? in actual policy making), and are only really taken seriously at the obscure margins of ‘academia’ or in the relevant forums, one should confront these ‘alternative theories’ with an empirically founded view and instead elicit to the problems of a stagnating economy that are habitually neglected by opponents of growth. The often-criticised ignorance of the ‘mainstream’ of economic theory vis-à-vis ecological problems is a myth that is just as unsubstantiated as the hypothesis of the word-wide conspiratory neoliberal economic community’s blind faith in markets.

Badinger and Cuaresma, 2020, orig. emph.⁵

This verdict is unsurprising. It promotes ‘sustainable growth’, yet lacks any distancing from conventional neoclassical economic logic based on the continuation of growth notwithstanding. One week later, doctoral researcher Katharina Keil reacted to the post in the same economics blog⁶, by convincingly refuting the two economists’ dismissal of degrowth. She rejects that degrowth is only being debated at obscure academic margins by pointing out that leading degrowth theorists have been cited just as much or more often than Badinger and Crespo themselves. She further points to the increasing policy relevance of degrowth thinking and criticises Badinger and Crespo’s employment of notorious misconceptions and clichés in elaborating on three misjudgements in particular, namely firstly, that economic recessions are what degrowth aims at, secondly, that some of their argument assumes other economic circumstances are not being considered by degrowth (which they are) and thirdly that there is still time for incremental change within the system. Given the assumption that degrowth thinking is helpful in facing climate change (which has also been fiercely debate at the research institute I work at), it counts to investigate if and how much of it is currently being presented to students of economics.

2.3 *Naturalisation*

The two main ideas of the degrowth approach are that continued economic growth is ecologically unsustainable and the need for it is itself an ideological construction (Kallis et al., 2018, p. 3). Here, Barbara Muraca emphasizes that over the last 200 years this understanding of the economy needing to rest on growth has served to legitimize the myth of growth-based development that originated in the global North: however, “global economic growth is a phenomenon of the 19th and 20th century, favored by historically unique socio-cultural circumstances and values that developed in close connection with capitalism and colonialism. In the previous 200,000 years, many peoples flourished without any growth at all” (Kallis et al., 2018, p. 11). Historically, this has entirely been ignored (ibid.). This growth ideology “naturalizes sociohistorical processes as unidirectional, continuous, cumulative,

⁵ <https://www.derstandard.de/story/2000118069546/was-hat-das-wirtschaftswachstum-je-fuer-uns-getan>

⁶ <https://www.derstandard.de/story/2000118157075/ist-das-festhalten-am-wirtschaftswachstum-wirklich-intelligente-politik>

and irreversible, thereby justifying the expansion of capitalist markets and economic growth throughout the world” (Muraca & Schmelzer, 2017, quoted in Kallis et al., 2018, p. 6). Hand in hand with this establishment of the growth paradigm also goes the mystification of economics as a subject that supposedly can only be handled by experts (cf. Kallis et al., 2018, p. 4), underlined by a fundamentally pseudo-scientific and complexified technical and exclusively *economic* vocabulary. An integral element of mainstream economic thinking is the conception of Adam Smith as one of the founding fathers of modern economics and his metaphor of the free market being steered as if by an invisible hand within his famous *Wealth of Nations* of 1776. Yet I argue that this interpretation must be seen as a pounding misrepresentation. Adam Smith was an Enlightenment philosopher who did not actually propose that everybody thinking of themselves will lead to the greatest societal benefit. He was, first and foremost a moralist, which can be seen, not least of all, within its other seminal text on the theory of moral sentiments that he published in 1759: “already Adam Smith recognised that in reality, the invisible hand of the market was entirely dependent on the visible hand of politics for it to unfold its societal welfare promoting effects” (Heidbrink et al., 2011⁷).

When considering the naturalisation of neoclassical economic principles, inevitably famous French sociologists Luc Boltanski and Eve Chiapello⁸ spring to mind who write that “a spirit of capitalism stems from a relatively stable set of arguments, most of which have been shaped by economic theory”⁹ (2005, p. 163). Yet this type of theory rests on the neoclassical misconception that societal welfare emerges automatically, through the invisible hand of the market, when individuals each follow their self-interest in maximising their own utility. Modelled on this seminal social theory of the spirit of capitalism, Gregor Kungl recently identifies “a green spirit of capitalism¹⁰” that he defines as “an economic mentality that orients, motivates and legitimises entrepreneurial action and is

⁷ Heidbrink, L. et al, 2011: Die Verantwortung des Konsumenten: Über das Verhältnis von Markt, Moral und Konsum

⁸ [s10767-006-9006-9.pdf \(springer.com\)](#)

⁹ First and foremost, a spirit of capitalism stems from a relatively stable set of arguments, most of which have been shaped by economic theory. Yet some of the explanations that one finds in economics are too general in nature, and too static over time. They do not impel ordinary persons to take up a particular type of lifestyle (i.e., type of profession), nor do they provide people with the argumentative resources that will enable them to cope with the circumstantial denunciations and personal criticisms they may have to face. A spirit of capitalism will only be consolidated if its justifications are concretised, that is, if it makes the persons it is addressing more aware of the issues that are really at stake, and offers them action models that they will actually be able to use.

¹⁰ To me it does not really make sense that Kungl looks for a green sense of capitalism at universities since Boltanski and Chiapello explicitly state:

p. 14: obviously, it would be unrealistic not to include these three central supporting pillars of capitalism – material progress, effectiveness and efficiency in the satisfaction of needs, and a mode of social organization conducive to the exercise of economic freedom compatible with liberal political regimes – in the spirit of capitalism. But, precisely by virtue of their very general and stable character over time, these reasons do not seem to us to be sufficient to engage ordinary people in the concrete circumstances of life, especially working life, or to equip them with the resources in terms of arguments that allow them to face the condemnation or criticism which might be personally addressed to them on the spot. It is not obviously the case that individual wage-earners genuinely rejoice because their labour serves to increase the nation’s GDP, makes it possible to improve the wellbeing of consumers, or because they are part of a system that creates room for free enterprise, for buying and selling. And this, to put it no higher, is because they find it difficult to make the connection between these general benefits and the living and working conditions they, and those close to them, experience.

p. 15: the justifications of capitalism that interest us here are thus not so much those referred to above, which capitalists or academic economists might elaborate for external consumption, particularly in the political word, but first and foremost those addressed to cadre and engineers. Now, if they are to be effective, the justifications in terms of the common good that they require must be based on localized criteria.

characterised by the idea of a fundamental compatibility of capitalist principles and ecological objectives” (2021, p. 3). Kungl finds the academic field to be an

essential field of (re)production of the capitalist spirit (...). Here, I assume that economics plays an important role in designing and distributing the content of a capitalistic economic ethics. (...) neoclassical economics conceptualises motives such as the pursuit of profit or self interest as anthropological constants whilst Sombart and Weber still tried to explain them socio-historically. This leads not only to the distribution of such imaginaries that are fundamental within a capitalist spirit, it also contributes to their entrenchment by implying that they are **natural**.

Maurer, 2007, p. 82; pointing to Albert, 1998, both cited in Kungl, 2021, p. 35, my emph.

Thus, Kungl’s findings suggest that there has been an increase in the sustainability-related modules within business administration Bachelors and Masters courses on offer at the 20 European universities whose economics curricula he examined (ibid. p. 38.). Based on this, this paper, lastly, investigates **whether there is reason to believe that economic teaching is increasingly displaying such a more ‘green’ spirit of capitalism** based on the qualitative interviews held with economics’ teachers and students as part of this study.

3. Methods

Guided semi-structured interviews with students and teachers of university economics courses were chosen as a qualitative method, because the interview partners can be considered ‘part of the practice field’ (Meuser and Nagel, 1991, cited in Schirmer et al., 2009, p. 194). Therefore, they are ‘intimate insiders’ (Liebold and Trinczek, 2002, cited in ibid.) of a particular societally relevant topic, in this case economic teaching at universities and its implications for dealing with the climate crisis.

The method of the semi-structured interview, hence an interview that uses a rough guideline, was chosen because according to Meuser and Nagel this does justice to both, “the thematically bounded interest of the researcher”, as well as the expert in his or her function (1991, p. 448). The preparation necessary for the conception of the guideline (here, the extensive literature review) ensured that the researcher was already familiar with the foundations of the research subject necessary for the conversation. Besides, “even though this might sound paradoxical, it is indeed precisely [...] the guideline itself, that guarantees the openness of the interview” (ibid., 1991, p. 449). When it is seen not as a recipe, but instead as a backup tool, the interview will be kept alive and not be impeded by it.

The interview partners were recruited via the researcher’s own university network. Hence recruiting was not carried out according to a random methodological scientific strategy, which did however bring the advantage of alleviating initial reservations through the superficial connection that did already exist (in some of the cases). This helped in the research moment, making it resemble a more relaxed private and therefore authentic conversation.

Furthermore, in two cases the method of snowball sampling was used, i.e., people were contacted on the recommendation of individuals already interviewed who knew someone who could further contribute meaningfully to the research subject. Already in 1958, James Coleman believed this strategy to be particularly helpful for social-scientific research, as it enables the creation of a setting along existing and naturally interacting entities. There exists however a certain apprehension that in this interview situation, there is an increased risk for social desirability to occur, namely a distortion of response behaviour that is attributable to the need for social validation. This then manifests itself through expected answers and a fear of rejection or judgement by the interview partner if an authentic response were to be given (cf. Bundesamt für Naturschutz, 2014, p. 21). Udo Kuckartz gets to the heart of this issue by saying: “Of course it is not difficult to respond to the questions, similar to

those one is asked by boarder authorities when entering into the US, in the right way and immediately you find yourself in the delicate presence of committed protectors of the environment” (2010, p. 145). This obstacle was dealt with by completely anonymising the interviews, which was clearly communicated to the interview partners beforehand and guaranteed via a data privacy form.

Since all these knowledge types are important in their own right, the challenge consisted in bringing to the table a certain sensitivity for reading between the lines in order to adapt the interview strategy to each conversation respectively.

4. Data

Professor heterodox economics:

- on Adam Smith:

You have to read him with the historical context in mind – and of course you cannot only speak about the Wealth of Nations but must also mention the Theory of Moral Sentiments; of course he focused on the individual but that was a complete novelty as individuals did not have much of a say in anything at this time [of beginning Enlightenment] (...) from this perspective, this was truly revolutionary and special; and according to the historical context he was of course deeply aware that individuals would never only think of themselves but of course always within the societal context and that they would always include in their thinking the group and family and this is what he strongly expresses in his theory of moral sentiments; that he is being portrayed as the forefather of *greed is hot* (Geis ist geil) is a complete misrepresentation

- on influence of other disciplines on theory:

whether there are alternatives to orthodox economics being taught, this depends on the institution in question; in general there are two tendencies that I observe: one is a narrowing and closing off, a general pulling up of walls, that can generally speaking be observed in the economics departments; and on the other hand, as many economists do not work within those departments, but in interdisciplinary departments and business schools and so on, where there is a need for direct economic expertise and there it matters less within which economic paradigm you work, but more what kind of approach you [...], on the contrary, when you are not as constrained by some narrow paradigm, then it is easier to contribute to an interdisciplinary team; and in these interdisciplinary settings, there is more of an opening happening and there are exciting processes when you work with other disciplines (...) that can then stimulate one's own discipline and so on – those are the two different tendencies that I observe.

- on XY
- on XY

	Sandra ¹¹	Maria	Caroline	Luca
Course studied	Business administration with some macroeconomics and sociology 400 students	Economic science (combination of macroeconomics and business economics), 800 students	Economics (used to have political economy in brackets, they have changed that now, as it is just not the case)	
University	Göttingen	Mainz	Heidelberg	WU (BWL)
Judgement on content	Neoclassic theory is useful as background knowledge but it misses the social aspects behind it; difficult to integrate social or sustainable aspects; I was relatively disappointed, especially with the business modules that deal with sustainable and social aspects because they did not go beyond SDGs and how one would go about conceptualising others indicators (beyond GDP) and [even] that was very much in its infancy still; it is not really very innovative the weighing of economic factors versus the socially- or sustainability-relevant factors is not really discussed, it remained very unethical in part, which leads to things staying the same with adding a few small tweaks	I really enjoyed one chapter in macroeconomics handled environmental economics (that was that same professor) but that was also embedded in neoclassical assumptions, that was the only mentioning of the climate crisis in the whole of these 6 semesters Limits of growth problematised only one time in environmental economics	Only concentrating on growth is incompatible with the crisis and that is the main point Whenever the theory didn't really fit, then one looked a little bit deeper and in the end concluded, well, rational choice is probably not given but these models were still all based on the rational choice assumption and the course was very much about understanding how the model works at later stages it is questioned more, but not in the beginning, in the beginning it's only about understanding this classical way of thinking	The content of my economics course was very straightforward business economics and there was no linking at all to social or environmental issues and there was very much a sense of the future consisting of climbing up hierarchically within a company To me what I learnt profoundly lacks practical relevance
compatible?				It was sometimes a very selfish way of thinking [that was promoted there], along the lines of get the maximum for yourself without considering the consequences, with in itself is already in conflict with the climate crisis
criticism of lack of pluralism amongst students?	no real questioning; when I asked about ethical aspects, the professors often said this was the job of other theorists; the argument was often that a corporation has to be profitable first before it can think about social and sustainability-related aspects	Other students were dismissive of the student protests (FFF), found them unnecessary and ridiculous; They would say: The crisis is not as bad as it is portrayed It doesn't change anything if individuals behave more sustainably; many were very selfish and thought that it's not gonna hurt the world if they behave that way; one was not at all critical of flying One time we from students for future collected signatures during our economics lecture, some joked along the lines of Fridays for Hubraum and made stupid comments instead of just not giving their support	Many students quit, 300 at the start, only half made it through There were two camps, those wanting to earn money and those who wanted to understand the theory but implicitly questioned its implications Our macroeconomics professor was a big deal in development economics but they believe that things could get better with economic approaches and that growth is what is most important as otherwise you have poverty	No questioning. For myself it was a kind of lingering awareness of climate change, so I thought about flying more and you maybe heard about carbon footprints in one of your specialisations and there you did the calculator during your time as undergraduate, there was some thinking about it but neither in study content nor out of personal interest climate change really was present in any considerable way

¹¹ Interviewees' names were changed to ensure anonymity.

any alternative thinking?	<p>Modules: environmental economics + sustainable management + controlling Environmental economics</p> <p>Theories taught here were still built on neoclassical thinking, were just incorporated into that thinking (when prompted:) I think those teaching do stand behind what they are teaching and like the fact that they offer something to do with sustainability; I don't think they acknowledge how little sustainable that really is</p>	<p>I wrote my BA thesis on welfare economics as I was lucky that I had a professor who was interested in that; he was the only teacher who was open to such alternative economic thinking and went beyond pure neoclassical theory that I came across in my undergraduate course; but he still taught neoclassical economics;</p>	<p>We were allowed to get 30 credits from other disciplines, 15 of which had to be from politics or sociology but the more they recruited professors from famous economics universities, the more content then went back to straight economics</p> <p>Alternative indicators mentioned, but only GDP applied</p> <p>Alternative thinking was present very little but it was present</p> <p>Inequality is considered, other issues only to a small extent</p> <p>The premisses are questioned in general, they are seen critically as one is aware that they don't really reflect reality</p> <p>but one always tries to adapt these premisses as little as possible, so there is no real change in thinking and one tries to stay within the system and tweak little bits to see how far that gets one</p>	<p>None, purely neoclassical thinking; climate issues did not feature at all during the course</p> <p>Inequality did not feature as an issue</p> <p>No approaches critical of capitalism featured during the course</p>
any radical approaches?	<p>There was a heterodox economics group but this was a voluntary out of teaching activity that was not offered as a module as it wouldn't fit into the syllabus</p>	nope	<p>I think economists are taught many negative consequences when there is stalling growth, especially in terms of inequality and recessions have been shown exacerbate that and there are very few ideas for solving that within economic theory – there is some powerlessness as there would be some solutions making rich people less rich and poor people less poor but they are not implemented and under these conditions, degrowth is extremely detrimental</p>	<p>I don't like that during my [master's] course right now the only solution that is talked about is radically changing everything; and we do need some change and some changes in thinking, but on the other hand we also simply need technology to solve things as it is a world shaped by the economy and that is hard to change, we will probably not overcome capitalism, and the best incentive to find something that helps the climate crisis is it being a big problem, that is when solutions are found</p>
ecological economics?		nope		
degrowth?	<p>Was dismissed as strange idea, post-growth economy was touched upon, sufficiency theory I never heard of</p>	nope	<p>Nope, not even in environmental economics</p> <p>Sufficiency you could do really well with economic thinking, I have read about it, but this doesn't happen</p> <p>And I think degrowth would have to happen under circumstances that economists do actually want to achieve but it appears more and more that they are so hard to achieve</p> <p>I think everyone is aware but there are so many preliminary steps that would have to be achieved beforehand that it is kind of a utopia</p>	<p>I find degrowth great in some areas, as in marketing we try to convince people to buy stuff that they don't really need in any way and that is 3 percent better than what they already have</p> <p>So if degrowth means that we don't market stuff to people that nobody needs I truly am in favour; I think the idea of entrepreneurship should be to design something meaningful that has a certain use</p>

naturalisation?	Respected were those who had internalised a business mindset, the startup scene was thought of as cool, many wanted to work for the Big 5; I was only really friends with 2-3 out of 400 business students, I was not really on the same wavelength with those students	I think it is very important to start with the foundations in a university course but I find it just as important to communicate that these ideas are abstractions, they are simplified models that one can turn to for help but that they are far away from reality and if you do apply them in reality, they will lead into a sustainability crisis; they are not future-compatible it is kind of implicit that things like the homo economicus or the rationality paradigm are abstractions but I didn't really notice any kind of problematisation what these simplifications bring with them when you only calculate on the basis of them;	I think there has to be communicated that these models and I think economists often lose this kind of thinking, even though at the beginning you are told that the models are not everything and only to be part of the decision and that they not consider a lot of things, this would have to be given more attention that this is always incomplete and there will always have been things left out	Content was classically capitalistic with professors trimming us that we would one day have a leadership position in a company It was all about increasing profits It was a mixture of people who didn't know what to pick to study at university and those who wanted to make it and build a successful career for themselves and when you only look out for yourself and then those who have higher incomes, in central Europe, they turn away from these issues
Adam Smith?	I heard from him in the module History of economic thinking, at school he was presented as the father of capitalism, later I was told that he was actually a philosopher, he generally was brought into connection with the invisible hand	Introduction into macroeconomics, I learnt about the invisible hand and that the market regulates itself, that was a large component of this introduction, he was portrayed as the founding father of market economics	The content was heavily influenced by him but he was only mentioned in the introductory session I know that you have Keynes on the one side and him on the other and he is more conservative, neoliberal and has shaped the neoliberal strand and Keynes the opposite, in terms of economic volatility and Keynes is seen as more the macro and Smith more the micro economical	Was an economist who developed an economic theory, it is about the free markets
what should happen?	Questioning economic growth but many companies still have 10 % annual growth as their target as they fear being bought up by bigger firms otherwise – there should be regulations that prevent such oligopolisation; growth should not be a matter of life and death for corporations Politics must also do a lot but I don't know exactly what I definitely feel resignation about economic teaching as I doubt it can and will change much Economics and sociological thinking should be integrated, is not treated as such at all in economic teaching – the connection is hardly every made	I would find it really important to communicate it early on during the Bachelor's course that we are in the middle of a sustainability crisis and these economic systems that result from the economic models taught here are not going to get us out of it; this was not communicated at all and so I find it entirely incompatible	I think degrowth is what would need to happen The Greens in their programme actually do pretty much exactly what climate economists ask, so for instance high taxes on carbon emissions and then strategically using those taxes for redistribution I think what we did in environmental economics is helpful, but there is no real change of thinking and much is still lost when you think along monetary value	I think the solution that certainly also features in my head is technological change and progress, finding solutions for the problems that we have; The question is, maybe there are some sort of technologies that can and will solve all our problems; and to a large extent I also believe that this will be part of the solution; when I ask myself what my colleagues would say, their clear answer would simply be technological progress we have lots of information about the change that needs to happen and the more we internalise this information, the more this change will unfold in the next couple of years because the picture of the whole of society is changing
verdict?	I am still in the minority having a problem with this; it is pure stagnation, there is some rising awareness but not the kind of awareness that can truly change something	I was with Students for Future and went to climate protests and so I kind of internally shook my head at how unrealistic the content in my economics course is and whether this is useful for our society, but I was nevertheless really interested in the macro-economic content. The business-related content that was mainly concerned with profit maximisation I was interested in less and less however	if I'm honest, I don't actually think that it is a kind of training that is conducive to critical thinking – I don't actually think that many economists come out of university and think the climate crisis is not as important as growth and so on – I don't think this training is harmful in that kind of way – I actually think that very few economists think very liberal I think you can change a lot [for the better] if you have studied economics	I'm very close to the issue of climate change through the other students in my [now more sustainability concerned] masters course, so I would say it is an interesting perspective that is kind of encroaching further and further into my life; So those people who do really care about and fear climate change have really impacted on me and increasingly infiltrate my business economics self, but the climate crisis has probably not convinced me yet to fail different decisions, (...) for instance I still fly as it costs me half the price and much less time than taking the train

5. Discussion

From these interviews it emerges that these economics' graduates were profoundly critical of the content taught to them in the face of the climate crisis. Especially Caroline emphasized that in her view, the course equipped her to think critically and that economists do not only think liberally but also care about the common good. Yet in other parts of the interview, she was, like the other interviewees, very critical of the content she was taught. Her partial defending of it may, as she insinuated herself, have to do with the type of people she was surrounded by during her taking of the course (the study culture that reigned in her 'bubble' as she said herself). It is also understandable that one is reluctant to portray entirely negatively what one has just spent several years dedicating one's time to.

These interviews also indicate that ecological economics does not feature at all in the university courses these students took. Yet even if such approaches were included, they still do not truly leave the realm or rationale of economic mechanisms. As John Ikerd writes:

The inadequacies of neoclassical economics in addressing issues of sustainability simply cannot be solved by internalizing social and ecological externalities. (...) Today, society and the environment are viewed as constraints on economic growth, not as cornerstones for long-term economic viability. (...) Our current system of economics, including ecological economics, has inherent inadequacies that continue to encourage and support decisions and actions that threaten economic sustainability.

Ikerd, 2005, p. 78

One approach often mentioned in connection to these questions, as was also the case in these interviews, is Kate Raworth's concept of the *doughnut economy* (see also Dale, 2022, p. 15). In her image, the economy should be embedded "within society and within nature, and powered by the sun" (ibid., p. 2).

As one of the students described in my interviews:

... professors get annoyed when others [outside of economics] find seemingly easy solutions as they are the ones considering all aspects of the models. Thus, this is smirked at, for example Doughnut Economics, this is also credited by some professors that there are some good ideas, but it also fails to consider many aspects...

Caroline

So we see that there is little readiness within economic teaching to consider alternative aspects. But even if the ideas proposed by Raworth were integrated into teaching, this would absolutely not go far enough! Firstly, while her problematization of mainstream economics' blindness to social and ecological limits is certainly appropriate (cf. ibid., p. 15), her analysis does not go beyond what has come to be understood as ecological modernization (ibid.). QUOTE ECOLOGICAL MODERNISATION

And, secondly, as economist Branko Milanovic¹² writes, people would have to "magically [become] indifferent to how well we do compared to others, and not really care about wealth and income" (2018). Yet, not only does it seem poudingly unlikely that we as humans will cease to perceive of ourselves in relation to those surroundings us: people make meaning not primarily in the absolute. The relative is what counts the most, as Richard Wilkinson and Kate Pickett have written:

¹² <https://rockspire.com/wp-content/uploads/2021/02/Amsterdam-Economics.pdf>

What matters is where we stand in relation to others in our own society. (...) We should perhaps regard the scale of material inequalities in a society as providing the skeleton, or framework, round which class and cultural differences are formed. Over time, crude differences in wealth gradually become overlaid by differences in clothing, aesthetic taste, education, sense of self and all the other markers of class identity.

Wilkinson and Pickett, 2010, p. 491/7171

But also, as mentioned above, greed, competition and self-interest represent integral principles of economic theory. Therefore, ultimately, as Dale concludes, “any serious addressing of the economic causes of climate breakdown will indeed entail a transformation of economics, but in the form of negation, through the overcoming of the system that it represents, justifies, and naturalizes” (2022, p. 17).

These interviews further show that neoclassical thinking also misportrays moral philosopher Adam Smith as the originator of the conception of self-interest as the engine of a well-functioning and just economy. [LINK TO ENLIGHTENMENT](#)

My interviews also indicate that theories that consider what has come to be known as *degrowth* are not being treated seriously in economic teaching today. Instead, it is generally “dismissed as a strange idea” (Sandra). This reflects what Dale describes as a further

... element of the growth paradigm [(...), namely] the yoking of economic growth together with the Enlightenment schema of historical progress. (...) With the original stage of humanity imagined as savage and contemptible, the conceptual space was created for a liberal-imperialist ‘stages’ model of progress to emerge, one that alloyed rhetorical universalism to the presumption of European command and control. (...) The assumption (...) was that growth benefits all (...).

Dale, 2022, p. 12f

This study’s findings show that this assumption, as pointed to by Muraca and Schmelzer (2017, see section 2.3) of linear progress and development is still deeply engrained in economic thinking and, by extension, teaching. Continued economic growth as cornerstone of economic theory that is deeply internalized in the system of economic thinking prevents any questioning of what has been called “growth-fetish[ism]” (Hamilton, 2004), even in the face of climate change. Neoclassical thinking has naturalized the growth paradigm to the point of it being treated like a principle of nature, which is confirmed by interviewees reporting that there does not occur any serious questioning of it during teaching. “These axiomatic laws are granted the status of natural law when studying economics” (Katharina Keil, Ö1 Radiointerview).

Thus, my findings refute what Kungl identifies to be an emerging *green spirit of capitalism*, since what is being taught at universities within the discipline of economics in terms of contemplating how to achieve sustainability, namely nothing going any further than the mere *greening of economies*, embodies at best, as Ingolfur Blühdorn writes, one of the popular narratives of hope or niche phenomena that tranquilize late modern societies who continue to fail escaping their sustained unsustainability (cf. Blühdorn et al., 2020¹³). Accordingly, the network for pluralist economics criticises that due this “monoculture within economic science”, most students leave university without ever having heard of any alternative traditions such as the Keynesian, ecological or feminist school of economic thought (cf. Netzwerk für Plurale Ökonomik, 2020, p. 15f).

6. Conclusion

This theoretical reductionism prevents economics graduates from thinking outside the narrow premises of neoclassical theory to find any kind of approach even remotely suitable to what would be necessary to face climate change.

Economics has widely become called the ‘the dismal science’, but this having to do with Malthus’ thinking on population growth from 1798 is actually a common misconception. Thomas Carlyle, a Scottish philosopher writing in 1849, found the political economic theory of his time to be ‘dismal’ as it failed to provide any justification for the continued application of slavery in the New World. “It was this fact – that economics assumed that people were basically all the same, and thus all entitled to liberty – that led Carlyle to label economics “the dismal science.” (Levy and Peart¹⁴). Clearly, for its axiomatic presumption of all humans being equal, the discipline of economics does not deserve to be labelled dismal – this misconception must vehemently be refuted. But if economic teaching continues to educate its students with the pounding lack of pluralism problematised in this paper, in the face of accelerating climate change, it will deserve the label “dismal” sooner than later after all.

¹⁴ <https://www.econlib.org/library/Columns/LevyPeartdismal.html>

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