
Sustainability and pluralist pedagogy: creating an effective political economic fusion?

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Abstract: This article considers the challenges of teaching about environmental issues and sustainability from a pluralist perspective within a political economy program. After considering the general characteristics of sustainability and pluralism, it discusses the advantages and the tensions arising from bringing them together in a university curriculum. The experience of teaching a Political Economy of the Environment unit at the University of Sydney is given particular attention. The results of a student survey show what can be achieved in terms of learning outcomes and students' interests and intentions.

Keywords: sustainability; pluralism; political economy; heterodox economics; teaching; learning outcomes.

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1 Introduction

It is important for scholars and activists concerned with environmental issues to engage with questions of how knowledge is formed and transmitted. What happens in universities is only a small part of this story, of course, but it is an arena in which questions about teaching and learning are necessarily at the fore. For teachers and students engaged in pluralist economics education, the issues are particularly pertinent. Can the study of environmental stresses be easily integrated with the study of economic systems? Is the former more compatible with the latter if a ‘competing schools of thought’ approach is taken? Does introducing sustainability into pluralist economic discourse generate new problems? Does a political economy approach, critical of mainstream economics, comport with the study of sustainability? Can teaching and scholarship of this sort contribute to environmental awareness and action?

This article explores these issues by looking at the synergies and tensions arising from:

- a Emphasising sustainability as a central concern of modern political economy.
- b The pluralist approach to teaching.

Combining these two concerns gives us a better understanding of the challenges in teaching political economy. This is a two-way learning process: learning from environmental analysis to improve political economic education, while learning from the experience of teaching political economy to deal effectively with environmental issues. The article draws on practical experience of teaching within the political economy program at the University of Sydney, Australia, as described previously in this journal (Stilwell, 2011), but the story has a specifically environmental twist here. The first section briefly considers how sustainability may be understood; the second section on pluralism in pedagogy explores how this relates to the teaching of sustainability; the third section describes the experiences of teaching and learning in a unit of study on the Political Economy of the Environment at the University of Sydney; and some concluding observations draw out lessons from this experience.

2 Sustainability

Any inquiry in economics or in the social sciences more generally, has as its primary purpose the generation of useful knowledge about what currently exists. A second purpose is the use of that knowledge for social improvement. These simple propositions immediately highlight the importance of judgements, for example, what aspect of the economy or society should be given attention and what evaluative criteria should be applied. Historically, economists have been distinctive in how they have narrowed their gaze, but even that has changed over time. Their focus has shifted from the creation of wealth, to the achievement of welfare (seen from the perspective of ‘utility’), to the conditions for equilibrium and/or growth, with much else coming into the mix from time to time. Therein, of course, lie complex judgements about ‘what matters?’: increased material living standards? Productive efficiency? Equitable distribution? Today, sustainability surely joins the range of concerns.

In general terms, sustainability is fundamentally concerned with reproduction – but reproduction of what? Stilwell (2000, p.269) distinguishes between the economic, the ecological and the social as ‘three interconnected dimensions’ of sustainability. For an economic system to be sustainable it must satisfy the necessary conditions for its own reproduction by, for example, replacing depreciated capital equipment. The social dimension of sustainability concerns the reproduction of the workforce, class relations and institutions necessary for wellbeing and social order. Ecological sustainability requires maintaining the reproductive capacity of biophysical systems, avoiding the degradation of land, water and air quality, and any form of resource depletion that would impact adversely on health and species diversity. Unless an economic system is sustainable in these social and ecological terms too, it will not be durable. Potentially catastrophic prospects would then arise. So, it cannot be considered contentious to say that modern economics, whatever else it does, must engage with issues of environment and sustainability.

But how best to do so? Simply posing this question immediately highlights the existence of alternatives, sometimes propounded with such vigour that denial of any other possibilities is implied. In some approaches, environmental questions seem somewhat marginal, as in the case of neoclassical theory. According to many standard neoclassical textbooks, the task of identifying an ‘optimal level of pollution/depletion’, where the marginal benefits of pollution abatement/resource conservation equal the marginal costs of that action, sets the conceptual framework within which the enquiry is conducted. Then, building on the foundational exposition by Pigou (1928) and the critique posed by Coase (1960), the policy challenge is to design the best means of addressing ‘externalities’ through policies that make market prices account for social costs and thereby produce more sustainable outcomes in an optimal manner. On this reasoning, market adjustments can produce sustainability through the process of satisfying the conditions for allocative efficiency.

In sharp contrast, other more radical approaches to conceptualising sustainability give environmental concerns such fundamental status that all the normal mainstream economic priorities must be challenged and replaced (e.g., Costanza et al., 2015; O’Connor, 1998; Mies and Shiva, 2014). From this latter perspective, rather than treating environmental concerns as an add-on to conventional economic analysis, socio-economic relations must be analysed as embedded within and developing through the bio-physical aspects of nature. The implications for policy and societal change are correspondingly profound, signalling the need for transformative change other than mere market adjustments if ecological sustainability is to be seriously sought.

How to deal with such sharply contrasting views? The acknowledgement of competing paradigms is an obvious first step. This is the most even-handed, (small-l) liberal educational response. It also ensures that radical and conservative views are assured a hearing. Evidently, even at this early stage of the argument, the importance of pluralism – or at least the simple recognition of competing perspectives – has a place. But exactly what place depends on how the contested nature of sustainability is itself interpreted.

The nature of sustainability is contested as both a concept and a condition. We have already noted the necessity of recognising economic, ecological and social dimensions and their interconnection. Each dimension provides a different vantage point on what is reproduced (goods and services, biophysical systems, and social cohesion) and how it is

measured (economic growth, ecological integrity, and quality of life) (Bryant, 2014). Competing economic perspectives emphasise some dimensions over others and consequently arrive at divergent understandings of sustainability. This is illustrated by the distinction between ‘weak’ and ‘strong’ sustainability (Neumeyer, 2010). The former is an economic conception whereby ‘natural’ capital is substitutable with other forms of capital if it increases total output, while the latter reflects an ecological conception of sustainability where the quality, health and diversity of ecosystems must be preserved. Considering these and other competing perspectives on sustainability is central to the pluralist pedagogical design of the Political Economy of the Environment unit of study discussed in the final part of this article.

Orthodox economic approaches to sustainability are worthy of consideration in this educational context, but a broader political economic perspective is essential to appreciate the economic, ecological and social dimensions of sustainability. The greater breadth of political economy is relevant on two levels. First, as a critical and heterodox approach to economics, the object of study in political economy is broad processes of ‘provisioning’ between humans and the environment, rather than just the allocation of scarce resources (Nelson, 1993). This provides a toolkit that is much better suited towards enquiry into sustainability-as-reproduction than neoclassical economics. Second, the broad socio-political and historical-geographical purview of political economy is essential for understanding how material interests, social struggles, and institutional structures connect social, economic and ecological crises and shape competing visions for sustainability – something that calls for a pluralist approach.

3 Pluralism

The general reasons for adopting pluralist pedagogy are many and diverse. The recent volume in honour of John King, a tireless advocate of pluralism in economics, provides a useful compendium (Courvisanos et al., 2016). It is pertinent, however, to briefly review some of the principal issues to consider their relevance for the sustainability question in particular. For this purpose, we can list four principal arguments for pluralism in economics. The first posits pluralism as the most sensible approach in an economics discipline that is inherently flawed, arguably to the extent of being in perpetual disarray. The second posits pluralism as the antidote to political bias in a discipline notorious for masking ideological differences behind the veneer of formal modelling and mathematical formulations. The third interprets pluralism as being the best means of achieving scientific progress. And the fourth posits that pluralism, by challenging the ‘tunnel vision’ of orthodoxy, is more conducive to critical creativity (Stilwell, 2006).

The arguments are not entirely compatible, as Mariyani-Squire and Moussa (2015) note. The first and third imply that economics is currently in a pre-scientific state. The second and fourth imply that scientific progress (as understood in the natural sciences) is effectively impossible in this field, so the challenge is how best to live with inherently judgemental issues. However, Maryani-Squire and Moussa (2015, p.205) drawing on the liberal views promulgated by John Stuart Mill, posit a basis for reconciliation, as follows:

“In our terms, because paradigm pluralism is the means to the ultimate goal of paradigm improvement such pluralist means must be ever-present because one can never be certain that a currently superior paradigm will remain so, and because (perhaps temporarily) inferior rivals still serve a justificatory purpose.

Even abandoned paradigms may be retained if they prevent accepted paradigms from atrophying into unreasoned dogmas and empty mantras.”

Pluralism is therefore a means of ensuring openness in inquiry while advancing knowledge in an uncertain and changing world.

There is a yet more straightforward case for pluralism when issues of economy and environment are considered. This rests on the importance of contesting an economic orthodoxy that is manifestly unsuited to grappling with the nature, causes and consequences of the current ecological crisis. To a considerable extent this is because the character of the discipline is at odds with the need for an interdisciplinary approach to understanding the environmental challenge. A mainstream economics perspective – or any narrowly economic perspective – is manifestly unfit to deal with an issue where scientific knowledge must be juxtaposed with complex ethical and political judgements.

This is not to claim that a pluralist perspective in dealing with issues related to the economy-environment relationship is unproblematic. However, it can be argued that each of the four general arguments for pluralism has particular force when related to environmental issues and sustainability in particular.

In the first case – dealing with the limited nature of current knowledge – the deficiencies of economic orthodoxy quickly become clear in relation to environmental stresses and policy issues. An analysis based on arguments for ‘internalising externalities’ to achieve an ‘optimal level of pollution’ needs to be contrasted with other perspectives that reveal more fundamental tensions arising from social relations, accumulation and growth impulses. Recognising the limitations of the neoclassical orthodoxy thereby provides a step towards seeing a bigger picture.

Pertaining to the second argument, the need to consider the range of possible policy responses is equally evident. The issues are continually in the public gaze. Is ‘putting a price on carbon’ either necessary or sufficient? Should coal-fired power stations be closed down as a matter of policy? Are mandatory renewable energy targets desirable and enforceable? Should there be a more comprehensive policy commitment to achieving a ‘de-growth’ or ‘steady-state economy’? The presence of these various posited policies for pursuing sustainability is so readily apparent that it would be politically blinkered not to give even-handed consideration to the different perspectives. Indeed, one would find it hard to find a clearer example of Joan Robinson’s justly famous observation that “with most problems nowadays, the economic answers are only political questions” [Robinson, (1980), p.275].

The complexity of socio-ecological systems and the limits of theoretical monism also make the third argument for pluralism particularly potent. Any progressive ambition must necessarily incorporate advances in knowledge generated by climate and environmental scientists. Economics cannot sensibly stand alone with its ‘disciplinary integrity’ unchallenged in such an inherently interdisciplinary field.

The fourth reason for pluralism is similarly pertinent in relation to environmental issues. It is the failure of current political economic arrangements to produce ecologically sustainable outcomes that makes fundamental rethinking necessary. Marginal adjustments cannot suffice. More visionary thinking and open debate between different analyses and scenarios is necessary. The claim of mainstream economists to have a ‘value-free’ analysis is rendered yet more absurd when faced with the interdisciplinary complexity and judgements necessary for dealing with this topic. The case for ‘letting many flowers bloom’ is hard to gainsay at a time when we are all facing the potentially

catastrophic consequences of climate change. ‘Academic monoculture’ is part of the problem and cannot be part of the solution.

Together, these considerations produce a particularly strong case for a pluralist pedagogy when addressing climate change, or environmental issues more generally. However, there are also difficulties involved in effective pluralist teaching in relation to sustainability. Here we focus on three: the different ontological positions underlying competing theories of economic relations with the environment; potential incoherence of different concepts and methods within particular schools of thought; and, fitting a pluralist curriculum on sustainability within a broader pluralist political economy program.

The study of sustainability makes the issue of the relationship between schools of thought especially acute because it places ontologies of society and nature – the subject of heated debate across the critical social sciences and humanities (see e.g., Castree, 2002) – at the forefront. Foundational concepts in competing economic theories of the environment are based on conflicting ontological positions. For example, ‘externality’ in environmental economics is premised on a separation of society and nature, ‘embeddedness’ in ecological economics understands society as within nature, and the ‘production of nature’ in Marxist ecology views capitalist society as developing through nature (Pigou, 1928; Martinez-Alier and Muradian, 2015; Smith, 2008). These differences can be productively used in pedagogical terms to draw comparisons between schools of thought, but ontological incommensurability poses problems for creative synthesis.

Methodological conflicts within key theories of economy-environment relations create further difficulties for a pluralist political economy curriculum. Ecological economics, as one of the primary heterodox alternatives to mainstream approaches to the environment, poses particular challenges that illustrate this point. As a school of thought, ecological economics is divided between ‘shallow’ and ‘deep’ versions. ‘Shallow’ versions retain mainstream assumptions such as rational utility maximisation and conventional methods such as marginalist cost-benefit analysis, while ‘deep’ versions embrace radical political economic modes of analysis (Spash, 2013). At the same time, pedagogically, this conflict within ecological economics offers a useful ‘bridge’ for a pluralist curriculum that moves from orthodox to heterodox and radical perspectives, as outlined in the discussion of the Political Economy of the Environment unit in the following section of this article.

A final, related question is whether there is a mismatch between the rival schools of heterodox economics and what is relevant for addressing sustainability. Keynesian and institutionalist economics are foundational political economic perspectives but they have not experienced the same intensity of theoretical development and debate on the relationship between capitalism and ecology as has Marxist political economy. Recently, Post-Keynesian scholars have actively sought to correct this relative deficiency, motivated by the renewed significance of irreversibly and uncertainty in the era of climate change (e.g., Holt et al., 2009; Perry and Primrose, 2015). The concerns of institutional economics with consumption, corporate power and evolutionary dynamics are clearly relevant to the political economy of sustainability, and the institutional arrangements required to transition to and sustain a zero-growth economy have been extensively debated (e.g., Farley, 2016; Latouche, 2009). This nevertheless creates dilemmas of curriculum design where choices need to be made between building on the main schools of political economic thought and introducing more explicitly ecological

approaches. We cannot adequately resolve these issues *a priori*: they need to be worked out in the process of teaching.

4 Experience in teaching Political Economy of the Environment

This section describes an elective taken by third year undergraduate students studying Political Economy at the University of Sydney (ECOP3015: Political Economy of the Environment). It draws on the experience of Gareth Bryant in teaching the unit of study from 2011–2015 as tutor and 2016 as unit coordinator. As a long standing political economy unit, ECOP3015 is, however, a collective product. It was originally designed by Stuart Rosewarne who established the core structure of the unit and coordinated it for many years. The course was first offered as a unit of study in 1993 as part of a Political Economy major within the then Department of Economics, providing a pioneering approach to the study of mainstream and radical perspectives on economy-environment relations. The unit has also been further developed by our colleagues Lynne Chester and Joy Paton, who have each coordinated ECOP3015 in more recent times. ECOP3015 is now a one semester unit of study with an annual enrolment of between 40–80 students.

4.1 Background

The University of Sydney is atypical because it has both a School of Economics and a Department of Political Economy (the latter within a School of Social and Political Sciences). This provides students with a choice between a conventional mainstream economics education and a political economy program in which more diverse and radical views are also systematically considered. The existence of the political economy program is an institutional arrangement born of struggle and sustained by the ongoing commitment and enthusiasm of staff and students (Butler et al., 2009; Stilwell, 2012). Both of us are from this program, and the unit of study we describe here is studied by students who have already chosen to study political economy as well as (or, more typically, instead of) mainstream economics.

Students undertaking ECOP3015 must have completed first and second year core units in the political economy program as prerequisites. Their first year studies begin with an introductory unit that leads students on a pluralist journey through classical political economy, Marxism, neoclassical economics, Keynesianism and institutional economics. At certain junctures, ecology is introduced alongside gender and race as central concerns of modern political economy. A second introductory unit of study builds on these foundational theories by looking at the history and dynamics of the global economy. As part of its critique of conventional approaches to ‘international political economy’, the unit includes some consideration of production, trade and finance as socio-ecological processes of global environmental change. Students are further exposed to sustainability when ecology is posited as a ‘social foundation of modern capitalism’ in a second year core unit of the same title. Polanyi’s (1944) notion of land as ‘fictitious commodity’ and O’Connor’s (1998) subsequent synthesis of Polanyi and Marx in conceiving nature as a ‘condition of production’ assume a central position here. These brief forays into the character of economic relations with the environment in the first two years of the Department of Political Economy’s pluralist curriculum form the backdrop for a more

systematic critical political economic study of sustainability in the third-year elective ECOP3015.

4.2 *Design*

ECOP3015 is built on the premise that different ways of conceptualising economic relations with the environment result in competing understandings of environmental challenges. Different diagnoses of the problem, in turn, prioritise particular pathways towards sustainability through political movements and/or policy prescriptions. This logic informs a curriculum that is structured around four main competing schools of economic thought on the environment: environmental economics, ecological economics, Marxist ecology, and ecofeminism. At different times the unit has also incorporated perspectives from social ecology, deep ecology and Indigenous peoples.

The unit opens with a discussion of the historical evolution of the notion of ‘sustainable development’ (and its degeneration: see Paton, 2008). This introduces sustainability as an idea and condition that is contested in theory and practice. The emphasis is on the links between divergent approaches to sustainable development as an economic, ecological and/or social concern and the schools of thought covered by the unit, which serves as a roadmap for the remainder of the semester.

Each school of thought is generally the focus of two teaching weeks. The opening week establishes the theoretical foundations, moving from conception of economy-environment relations to understanding of environmental degradation. The second week is oriented towards the school of thought’s vision for sustainability and the required politics and policies. The order of presentation moves from orthodox to more heterodox perspectives.

Environmental economics is first up, primarily because it remains the dominant school in academic and policy circles. Adding the environment into neoclassical economic theory, environmental economics conceptualises environment and economy as ontologically separate, interacting through market forces of supply and demand via the price mechanism. This informs common understandings of resource depletion or pollution as cases of ‘market failure’ caused by unpriced externalities (Pearce et al., 1989; Harris and Roach, 2013). Proposals for market mechanisms, such as carbon taxation or wetlands trading, naturally follow as a means of restoring allocative efficiency and achieving a form of sustainability consistent with economic optimality (Tietenberg, 2006; Stern, 2007).

Next, ecological economics is introduced as both a challenge to environmental economics and a heterodox framework for analysis and practice. In contrast to the orthodoxy, ecological economics is distinguished by its view of economic systems as a sub-set of broader ecological systems, emphasising the material and energy flows that constitute and constrain economic activity. Looking through this lens, ecological crises assume a different character grounded in the irreconcilability between economic growth and a finite biosphere (Costanza et al., 2015; Boulding, 1966). Respect for ecological limits replaces economic efficiency in the vision for sustainability, principally as a steady-state economy that operates within assimilative and regenerative capacity of the biosphere and minimises energy throughput (Daly, 2016; Washington and Twomey, 2016).

Marxist ecology is then presented as a more radical political economic perspective that focuses on how capitalist economies develop by creating and becoming specifically

capitalist ecological configurations. The embeddedness of the economy in the environment is re-cast in value-relational terms as the dependence of expanded capital accumulation on the appropriation of nature (Moore, 2015; Burkett, 1999). Capital is therefore self-expanding and self-limiting, producing its own ecological limits by undermining its conditions of existence. In this formulation, conventional policy tools will not suffice: anti-capitalist movements are needed for collectively and democratically organising socio-ecological relations for sustainability (O'Connor, 1998; Foster et al., 2010).

The fourth school of thought, ecofeminism, broadens the radical political economic component of the unit by considering the gendered nature of economic relations with the environment. None of the unit's schools of thought operate within a wholly singular framework, but ecofeminist scholars are particularly heterogeneous. They have quite varied conceptions of the connections between women, gender relations and the socio-ecological reproduction of capitalism (Mellor, 1997; Mies and Shiva, 2014). By exploring these different strands of ecofeminism, this part of the unit expands understanding of how environmental challenges relate to gender hierarchies and oppressions. Women as political actors and eco-feminist principles of regeneration, sufficiency and diversity become central in guiding pathways to a sustainable future (Salleh, 2009; Gibson-Graham, 2006).

Each lecture is focused on a particular school of thought but also compares and contrasts conceptual foundations, understandings of environmental challenges and the preferred practical solutions between different schools of thought. Significant emphasis is placed on case studies of environmental issues: fishing, transport, biodiversity, peak oil, consumption, food, fossil fuels and water. In the final three weeks of the unit, all main schools of thought are drawn upon and brought together in applied discussions of key contemporary debates. In 2016, these were: the 'green economy' versus 'the commons' (UNEP, 2011; McCarthy, 2005); the Anthropocene versus the 'capitalocene' (Steffen et al., 2007; Moore, 2016); and Klein's (2014) book *This Changes Everything: Capitalism vs. the Climate* and its accompanying documentary. Lectures each week are followed by smaller tutorials, focused around in-class discussion of set readings guided by explicitly stated learning objectives.

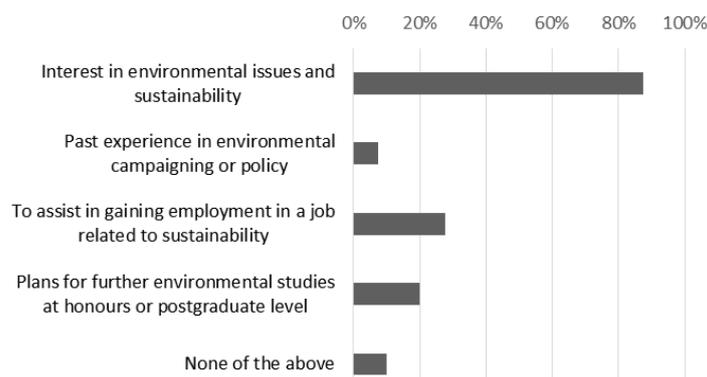
The overall rationale of the unit of study is also reflected in the three-part structure of assessable student tasks. Writing a short essay early in the semester requires each student to critically analyse core concepts in environmental economic theory – efficiency and optimality – and the influence of that theory's dominant notions of sustainability on the design of environmental policy. An extended case study that each student must submit by the end of the semester builds on the first assessment as a more explicitly comparative and empirical task. Students are required to appraise competing understandings of the orthodoxy and at least one heterodox perspective on one of the environmental issues listed above and then evaluates existing or proposed policy or political responses. The topics align with those covered in the lectures, but students are encouraged to narrow and deepen their historical-geographical focus through independent empirical research. The third assessable requirement for each student is to lead small group discussions in tutorials connecting learning objectives, conceptual material in readings and contemporary environmental concerns. Together, these three assessments are intended to foster the students' critical, creative and innovative capacities.

4.3 Outcomes

In 2016, 45 students enrolled in ECOP3015. An online questionnaire was distributed in week ten of the 13 week semester in order to gain information about their learning process and outcomes. The questionnaire asked about: students' educational background and reasons for enrolling in ECOP3015; prior experience with pluralism and sustainability in the political economy curriculum and where they see ECOP3015 in relation to this; whether the overall rationale of the unit was being achieved; and, the practical outcomes of the unit in how it has influenced thinking about sustainability and what they think they will do with this (if anything) as graduates. In total, 40 responses were received, representing just under 90% of enrolled students. For the three students in the class who were on an exchange program from international universities, studying at the University of Sydney for just one or two semesters, answers to questions about previous studies in the Department of Political Economy were marked 'N/A' where necessary.

Third year students in the political economy program at the University of Sydney often combine their studies in political economy with other subjects studied as majors. We asked students what, if any, other majors they were pursuing, as these studies simultaneously influence their educational experiences and perspectives. Of those studying ECOP3015 in 2016, 32.5% indicated that they were majoring only in Political Economy. The most popular major in addition to political economy was Government and International Relations, a combination taken by 22.5% of students. Beyond this, majors were extremely varied. Only two students (5%) were majoring in mainstream economics, the same number undertaking majors in French, Geography and International Business. Other majors included: Social Policy, Finance, Accounting, Environmental Studies, Human Resources, Anthropology, Philosophy, Neuroscience and Ancient History. So significant variety exists in what other subject knowledges students bring to ECOP3015 and how this unit of study 'fits' into their degrees. An interdisciplinary orientation is indicated by this feature alone.

Figure 1 Why did you decide to enrol in ECOP3015?



To gauge their initial motivations (which could be multiple), students were asked why they enrolled in ECOP3015 (see Figure 1). Almost all students (87.5%) selected an interest in environmental issues and sustainability. The next most popular reason selected by 27.5% of students was a hope that the unit would help them gain employment in a

sustainability-related field, followed by 20% of students who planned on engaging with further studies at honours or postgraduate level. The least common response was experience in environmental policy and campaigning, selected by only three students. Thus, student interest in the topic far outweighed specifically political or instrumental motivations.

Because we are interested in student perceptions of both pluralism and sustainability, our questionnaire then asked whether they thought that sustainability was integrated into prior studies in political economy and whether the pluralist approach in ECOP3015 built on the main schools of thought they had previously studied in the political economy program (see Table 1). Only one student disagreed with the proposition that the political economy program had exposed them to a range of schools of political economic thought. This indicates that the pluralist element in the design of the political economy program was almost universally recognised. However, their attitudes on the integration of sustainability into the program were more mixed. 45% of students agreed or strongly agreed that sustainability is part of the subject matter in other units in political economy they had studied. 20% were neutral, and 27.5% disagreed or strongly disagreed, although only one student was in the latter category. These latter responses are not surprising because ECOP3015 deals much more explicitly with environmental questions than other units in political economy. Indeed, that is its *raison d'être* from a pluralist political economic perspective.

Next, we sought to learn about student perceptions about the fit between the main heterodox schools of thought and those with a more specific ecological focus, by asking whether the schools of thought in ECOP3015 build on those studied in previous units. About two-thirds (67.5%) agreed or strongly agreed with this proposition (see Table 1). Evidently, the majority of students perceive substantial continuity in how the unit of study relates to their previous studies in pluralist political economy. However, one quarter of students were either neutral or disagreed, with numbers evenly split between the two positions – evidence of some interesting tensions between economically pluralist curricula and the study of sustainability. Indeed, ECOP3015 is structured around some schools of thought, such as environmental economics and Marxist ecology, which explicitly attempt to develop neoclassical and Marxist thought in an ecological direction. Conversely, it also introduces schools of thought such as ecological economics that are significant in heterodox economic studies of the environment but less easily assimilated into the theoretical pluralism of existing core political economy units.

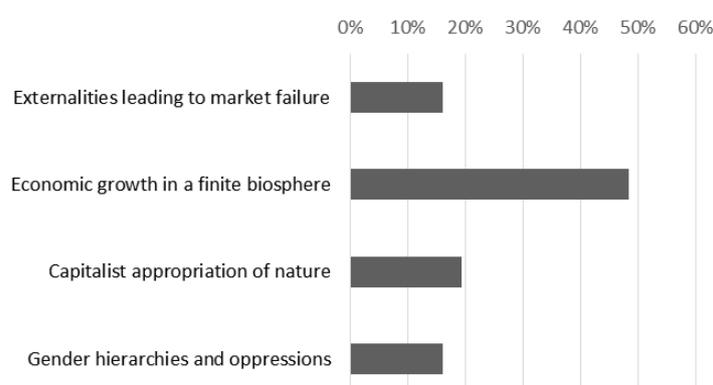
While it is heartening that students recognise that the whole political economy program is indeed pluralist, the survey results indicate some dissatisfaction with the weight given to environmental matters in their earlier studies and a desire for this to be rectified. That this view comes from a group of students particularly interested in environmental issues and sustainability makes it less surprising, of course. However, it may also be attributable to the shortcomings of schools of thought such as Keynesianism and institutionalism. It also speaks to the challenge of integrating sustainability throughout a pluralist political economic program. This would mean making ecology a central concern in the study of all political economic ideas and processes, rather than being restricted to an elective unit. Such an approach would address the somewhat mixed perceptions on how ECOP3015 builds on earlier units in political economy. Alternatively, students views may be interpreted as simply reflecting the progression in their understandings as they have moved into this specialised senior elective.

Table 1 Summary of student responses to agree/disagree questions

<i>Question</i>	<i>Strongly agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly disagree</i>	<i>N/A</i>	<i>Total agree</i>	<i>Total disagree</i>
My previous studies in Political Economy have exposed me to a range of schools of economic thought.	55%	35%	0%	2.5%	0%	7.5%	90%	2.5%
My previous studies in Political Economy have integrated concerns about sustainability into the subject matter.	17.5%	27.5%	20%	25%	2.5%	7.5%	45%	27.5%
The competing schools of thought in ECOP3015 build on the main schools of thought in my previous studies in Political Economy.	25%	42.5%	12.5%	12.5%	0%	7.5%	67.5%	12.5%
Studying competing schools of thought in ECOP3015 has improved my knowledge about economic relations with the environment.	52.5%	37.5%	7.5%	2.5%	0%	-	90%	2.5%
Studying competing schools of thought in ECOP3015 has improved my understanding of environmental challenges and policy/political responses.	50%	42.5%	5%	2.5%	0%	-	92.5%	2.5%

The next set of questions switched the focus to learning outcomes, exploring the effectiveness of the teaching and study in ECOP3015 itself. Responding to the question about whether the unit's pluralist method had delivered on its stated rationale, 90% of students agreed or strongly agreed that studying competing schools of thought improved their knowledge about economic relations with the environment (see Table 1). Then, responding to a question on the implications of this rationale, 92.5% of students said they agreed or strongly agreed they had improved their understanding of environmental challenges and options for policy and political responses (see Table 1). 'Strongly agree' was the dominant response in both of these cases.

Figure 2 The most important factor in analysing and addressing sustainability is...

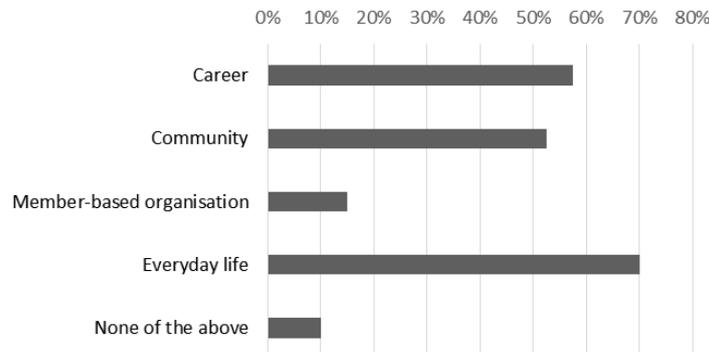


When asked in the next question to rank what they viewed as the most important factor in analysing and addressing sustainability, the most popular was 'economic growth in a finite biosphere', comprising about half of responses (see Figure 2)¹. The other half was fairly evenly split between 'externalities leading to market failure', the 'capitalist appropriation of nature' and 'gender hierarchies and oppressions'. These options, designed to mirror the preoccupations of ecological economics, environmental economics, Marxist ecology and ecofeminism, respectively, show that the students were most convinced by the focus of ecological economists on the limits to growth. Of those that gave their number one rank to this option, two-thirds ranked the 'capitalist appropriation of nature' at number two, suggesting a strong appreciation of the role of capitalist class relations in generating contradictions between economies and ecologies. On the other hand, the fact that six students – a small but noteworthy number – gave first place to the 'externalities' option may indicate their reluctance to 'move on' from a neoclassical position to which they had been exposed before taking ECOP3015, or that they were more convinced of the orthodox approach as it is applied to the environment. Whether for these or other reasons, students who line up with the orthodoxy presumably do so with a deeper understanding of the strengths and weaknesses of that approach in relation to other schools of thought.

Reflecting our concern with the role of sustainability and pluralist pedagogy in addressing environmental challenges, we asked a final question on the practical outcomes of ECOP3015. Where students think they will place their energies as a result of studying the unit produced quite revealing responses (see Figure 3). Answering this forward-looking question, a much higher proportion of students said they would pursue

practical action towards sustainability compared to the reasons given for enrolling in ECOP3015. The most common response (selecting more than one option was permitted) to being asked whether and how ECOP3015 is equipping them to work towards sustainable outcomes, was in their everyday life. 70% of students nominated this option, signalling their intended or likely ongoing personal interest in sustainability. 57.5% of students reported that they thought the unit would help them in their career, which was more than double the proportion that enrolled with this intention. Similarly, while less than a handful of students selected the unit on the basis of past environmental campaigning or policy, more than half (52.5%) stated that ECOP3015 equipped them to work towards sustainability through community action. Only 15% selected the more explicitly political option of working in a member-based organisation, but this was still double the number (6 rather than 3) that enrolled on the basis of this type of prior experience. Their formal education is, of course, only one factor among many in shaping the personal and political commitments and activities of students.

Figure 3 Studying ECOP3015 is equipping me to work towards sustainable outcomes in my



5 Concluding reflections

This article has made the case for a pluralist pedagogy in addressing environmental issues and sustainability from a political economic perspective. The arguments are based on a consideration of the array of ecological, social, economic and political issues that need to be addressed in this field of study. They are also partly based on ‘what works’, drawing from the practical experience of a unit of study taught for many years in the political economy program at the University of Sydney. The evidence indicates that teaching about environmental issues from a pluralist political economic perspective can engage students’ interests and help them develop deeper understanding of complex challenges. As ever, the effectiveness of teaching depends on a broader array of teacher and classroom characteristics, not only on whether the curriculum is structurally pluralist. Some students are probably content just to have a clear course or to be treated as adults during the teaching and learning process. However, our survey also shows that, by seeing the subject matter from alternative perspectives, most students can also gain deeper understanding of the issues and deeper insight into the politics of ‘making a difference’.

‘What then?’ is a question about how this education relates to the processes of personal, social and political change. What, if anything, follows from successive cohorts

of university students becoming better informed of the political economic challenges and ramifications of seeking sustainability? Our experience and conclusions are tentatively positive. The evidence indicates that students become more aware of the tension between what is currently on the reformist political menu and what would be needed for a more thoroughgoing solution to the economy-environment challenge. Understanding these broader dimensions of social sustainability is a big step forward from neoclassical notions of ‘internalising externalities’ and seeking the ‘optimal level of pollution’. The students are thereby better equipped to contribute, as citizens, to progressive social and political change at this crucial historical conjuncture.

Do they actually do so? This final concern goes to the link between an informed citizenry and activism. Although what happens in the classroom does not directly change the world, it can equip people – typically young, concerned and active people – with the awareness, knowledge and capacity to make a difference. The evidence generated in our questionnaire suggests that, based on our experience at the University of Sydney, this can and does happen.

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Notes

- 1 The responses reported in this paragraph are based on those given by 31 of the 40 students that completed the survey, as some students selected more than one option as the most important factor.