APPLIED POLITICAL ECONOMY:
AN INTERDISCIPLINARY PLURALIST APPROACH

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Political Economy can be challenging to teach since the people who engage with it have a wide range of interests, experiences, socio-economic backgrounds and cultures. Political economy can connect multiple disciplines, including economics, sociology, anthropology, political science, history and philosophy. However, it also needs an organising mechanism by which people can learn and appreciate the span of perspectives and interests under this multidisciplinary umbrella. This article seeks to provide that missing link by indicating a method for studying applied political economy.

It builds on and broadens the approach of Daniel Underwood (2013) who developed an approach he called Applied Political Economy (APE) to support students' learning about the range of perspectives *within* economics. Underwood's method promotes pluralism as an amalgam of approaches within this discipline, including both mainstream and heterodox perspectives. Although his method provides an opportunity to recognise the secondary influence of other disciplines, it is grounded in economics.

Pluralism can also be cast more broadly as interdisciplinary collaboration. Seen in this way, political economy involves not only schools of economic thought but a range of disciplines with equal emphasis. Which discipline has primary emphasis depends on the issues being analysed. The enhanced scope adds an element of challenge that Underwood's approach does not account for. Yet it enables students to enter debates heterodox economics, economic sociology, international political economy, economic geography, and others. The reward for meeting this challenge is enhanced

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engagement by those who might have been discouraged by the economics orientation that emphasises mathematical and technical skills.

This article begins with a section describing the elements of Underwood's original APE approach. The second section presents extensions of this method to the interdisciplinary realm, which places greater emphasis on open systems of analysis, unifying the various disciplines, and incorporating empirical methods to suit the context without the rigid requirements on data that Underwood's approach requires. The next section discusses the use and effectiveness of an interdisciplinary APE within the Political Economy program at the University of Sydney. Finally, the challenges of artificial intelligence are considered before the article's conclusion.

Underwood's APE

Underwood's approach to Applied Political Economy is *intra*disciplinary in that it encompasses the schools of economic thought, offers opportunities to build knowledge through applications and dialogue, and supports discovery-based learning. There are four parts to it: operationalisation of critical thinking, integration of multiple (economic) paradigms, monitoring of the students' cognitive progress, and applications of analytical and empirical approaches to facilitate understanding of the social construction of reality (Underwood 2013: 6).

Operationalisation of critical thinking begins by defining critical thinking as involving the identification, description and prediction of economic processes. Underwood's definition, moreover, invokes a particular definition – critical thinking employs empirically grounded reason, both to understand phenomena of interest and to inform value-laden decisions (Underwood 2013: 6). This definition allows explanations of economic processes to be characterised by paradigmatic models. The models' propositions need to be empirically validated for explanatory power and predictive capabilities. Other disciplines that do not formally test their models, Underwood argues, are at risk of simply promoting tautological belief systems. This is not necessarily the case, as discussed below.

An implication of his approach is that critical thinking is sophisticated if it employs mathematics. Students' progression or development of critical thinking is then reflected in the construction of tests and models and in validating the accuracy of the results.

Integration of economic paradigms (or schools of thought) is, of course, multi-paradigmatic. Integration is achieved by, first, acknowledging that the creation of knowledge is a social process. Students are asked to identify what influences their value structures: culture is a key influence. Different value structures ultimately yield different visions of economic processes. Those processes culminate in modes of analysis (paradigms or theories) that result in variations in recommendations for economic policies. Development of critical thinking is stimulated by comparing perspectives on economic processes and what constitutes statistical rigor when locating empirical evidence to evaluate their explanatory power.

Underwood explicitly defers to Joseph Schumpeter's exposition of the values and vision each individual holds, including the influences of family, socialisation, religion, education, culture. He quotes Schumpeter (1954) as saying that: '(D)ifferent value structures give rise to alternative economic paradigms – theories – about the nature of the economic process' (as cited in Underwood 2013: 8). An individual expresses his/her values through vision, analysis and policy. Individuals may have shared experiences, in which case they formulate a paradigm that reflects their value system. Moreover, each paradigm entails its own assumptions, chains of reasoning or logic, and either logical conclusions or applications that yield insights. These insights guide or rationalise policy recommendations to obtain improved outcomes. Integration of economic paradigms is thus linked to the development of critical thinking.

The specific outcome that Underwood is personally keen to improve is income distribution. He recognises that evaluation of policies affecting the split between wages, profit, rents, and various other income streams will be colored by the values encapsulated within the paradigms. For instance, improvements to growth of workers' earnings could be viewed as an issue of labor productivity enhancement or an issue of enhancing union strength. What Underwood has constructed frames applied political economy as 'a use of alternative paradigms to systematically trace out how economic science is used to support policies directing the distribution of income' (Underwood 2013: 11).

A map of cognitive pedagogy is implemented with a survey at the start of a unit or course. The survey provides an opportunity for students to express their opinion on a topic with prompts as to why they think the way they do. The next step is to assist them locate primary and secondary sources of empirical data or indicators to begin to substantiate their stances. Students

are tasked with monitoring changes in indicators and locating patterns, such as trend lines. The patterns are discussed and compared with explanations to see which has the best support. Over the course of a semester, a unit should provide students with perspectives on a range of issues, noting where applicable the empirical support for each.

Social construction of reality, the last objective, conveys to each student that they have the ability to socially construct their understanding of economic processes, test it for validity and make possible adjustment. Underwood points to how doing this in a capstone (project) for the unit

> creates the context and content to assess the extent to which learning objectives have been attained […] It is an opportunity for students to discover their term long efforts to master critical thinking as a tool of intellectual liberation have been successful (Underwood 2013: 17).

Underwood acknowledges that the importance of statistics and econometric techniques is not devoid of bias. Mathematics involves deductive reasoning and entails a particular type of logic. This is what mainstream economics employs when constructing assumptions regarding an agent's behavior, using deductive reasoning to obtain conclusions that can be tested with econometrics and statistics. Much of the logic and reasoning underlying the empirical techniques are consistent with the logic and reasoning underlying the economic theory. The systems of reasoning are *closed* in the sense that everything that is needed to conduct the analysis is contained within the assumptions and application of deductive logic.

However, insistence on using these techniques may make it more difficult to obtain empirical evidence for the heterodox schools of economic thought. Heterodox economics employs *open* systems of analysis, whereby analyses begin with mutually supporting statements and chains of reasoning are then undertaken to obtain conclusions; or case studies are constructed to support the statements.

Underwood's insistence on the use of statistics and regression analysis preferences conventional techniques to establish robustness and undercuts support for alternative viewpoints. Certain topics analysed by heterodox economics – such as financial fragility – can be amenable to testing with conventional empirical apparatus, but what about the rest? A better approach is to use an open system approach.

Scholarly reactions to Underwood (2013) have predominantly sought to extend his APE as an *intra*disciplinary approach. Natarajan (2017), for example, discusses how to extend Underwood's approach within a mainstream economics department to introduce new paradigms with which students may resonate, providing some opportunity for students to incorporate or embed heterodox ideas into the curriculum, assessments and senior projects. However, the use and acceptability of non-reductionist methodologies becomes contentious. For example, broadening the focus from income distribution towards a multi-dimensional concept of wellbeing and social provisioning may face challenges with satisfying concerns about 'rigor'. The reductionist methodology of mainstream economics aligns the assumptions underlying theory and empirical techniques and claims the desire for rigor is achieved through mathematical precision. Natarajan notes the implication that:

> (T)he pedagogical and intellectual work based in social economics, capabilities and human development… [is] often perceived as being 'soft', and thus 'not rigorous' (Natarajan 2017: 536).

Schneider and Underwood (2017) uphold the use of APE in discovery-based learning. This entails the application of empirical techniques to both mainstream and heterodox approaches and comparing the outcomes. Friesner et al (2021) discuss how the critical thinking component of APE can be improved with 'thought maps' and a focus on cases pertaining to microeconomics. Underwood (2020) provides an exercise for the first day of class in which students are made to understand the APE approach, as applied to macroeconomics, and begin to engage with data sets and issues to be addressed throughout the unit.

Overall, it appears the uptake of Underwood's APE (2013) has been only modest. The question is why? One factor may be that enrolments in economics have been declining for some time, particularly in the US, Canada, Australia and New Zealand (Chow 2025). Students have become more interested in business degrees, such as commerce and finance, law, and in arts and social science degrees. Another factor is that Underwood treats economics – whether mainstream or heterodox – as the foundational discipline; and its heavy use of mathematics may deter students from enrolling if they have math aversion. The emphasis on mathematical ability as key to contributing to discussions on the economy could be a strategic error in a deteriorating market.

A more fruitful multidisciplinary approach to APE that takes an open systems approach need not have these drawbacks. There are valid frameworks of analysis in which chains of reasoning can be sophisticated, but not necessarily mathematical. Empirical support can be located by posing questions such as: do time series move the way an analysis suggests; is there evidence about the strength of relationships between variables; is there a way to anticipate events based upon behavior of series; and do behaviors vary under different contexts? My experience with political economy is that time series analyses work well to help garner empirical support, as do case studies and surveys, functioning as well as traditional econometric and statistical analysis. The situations will guide the way evidence is gathered.

Towards a broader APE

An *inter*disciplinary orientation for APE involves the multi-dimensional facets of social provisioning, not simply the economic processes of production, distribution and consumption of goods and services. Analyses of social provisioning can assess non-economic influences in more depth, revealing insights and opportunities for further examination. An interdisciplinary APE expands the range of empirical techniques to include those that entail fewer restrictions. For instance, time series analysis does not require the full range of assumptions involved in regression analysis, such as the latter's emphasis on normal distributions. One just needs to be mindful that the assumptions leading to robustness are adhered to.

Operationalisation of critical thinking

This objective delves deeper into the identification, description, and prediction of processes that influence social provisioning. Unlike Underwood (2013), critical thinking is not defined with reference to empirical techniques but with the robustness in the use of open systems of analysis. The emphasis is on the consistency between mutually supporting arguments at the start of an analysis; and the quality of the chains of reasoning or case studies that lead to results. Critical thinking can, but does not necessarily, involve the use of empirically grounded reason. It depends on the context.

Integration

*Intra*disciplinary APE and *inter*disciplinary APE are methodologically similar, in that both require an open system method. A closed system is based on deductive reasoning where behavior of individuals is expressed in terms of axioms (of choice) and conclusions are obtained through deductive reasoning. In contrast, an open system of analysis begins with mutually support arguments, cast at the level of groups (such as classes) and arrives at conclusion either through applying chains of reason to the arguments or through the applications of the arguments.

An interdisciplinary APE necessarily makes use of the open systems method, as non-economic disciplines readily involve this style of analysis. As argued more specifically in Schroeder (2019):

> An open theoretical system must satisfy at least one of the following four criteria regarding perceived reality: it is not atomistic; there is interdependence between structure and agency; there are mutable boundaries (attributed to evolving social structures and connections between structures and structure-agent relation); and social structures are embedded within larger structures. The criteria suggest there may be variables and relations that are omitted; the distinction between exogenous and endogenous variables is fluid (not fixed); and the relationships between structures is not completely known or unstable, as is the relations between variables (Chick and Dow 2005: 366).

Map of cognitive pedagogy

An ideal way of introducing students to the more fluid approach to interdisciplinary APE is to conduct an initial survey of their views on a topic related to social provisioning. This provides an opportunity for each student to express their opinion and to explain why they think that way. Their explanations can be adjusted or modified over time. In my units of study, the frameworks or theories initially presented are usually quite mainstream, as they are likely to be what students are familiar with through the influence of the media. As the semester proceeds, alternative perspectives are presented, including those from other disciplines and indigenous cultures.

The next step is to locate primary and secondary sources of empirical data or indicators that may substantiate the students' views or cause them to change those views. Here, the data sources are wider because of the

additional disciplines involved. The UN's Sustainable Development Goals (SDGs) are a good place to begin the location of data series across disciplines. Students are tasked with monitoring changes in the socio-economic indicators and locating patterns with the use of trend lines. The patterns are then discussed and compared with explanations to see which has the best support.

Construction of social reality

The last objective is to allow each student to assess their view of society for its empirical validity and to understand the place of one's contributions within the relevant literatures. Underwood notes that this

> creates the context and content to assess the extent to which learning objectives have been attained […] It is an opportunity for students to discover their term long efforts to master critical thinking as a tool of intellectual liberation have been successful (Underwood 2013: 17).

In interdisciplinary APEA, the scope for achieving this outcome is wider and the range of techniques to garner empirical evidence is broader than in *intra*disciplinary APE. Knowledge from indigenous cultures can be incorporated to enhance understanding of, for instance, what constitutes sustainability of social provisioning in the context of climate change.

Evidence

Within the discipline of Political Economy at the University of Sydney, academic staff recognise the multi-dimensional nature of social provisioning and the importance of institutions, policy, regulation and governance in shaping the dynamics of processes related to social provisioning. An *inter*disciplinary orientation further widens the scope for students to analyse what interests them, and to understand how different aspects of their visions influence the objects of analysis, their understanding of processes, and the implications of policy. This *inter*disciplinary approach, again, provides a richer experience than an *intra*disciplinary approach based on economics.

The Political Economy discipline offers a variety of interdisciplinary units that focus on different aspects of social provisioning at the domestic and international levels. Topics on offer include economic development,

income and wealth distribution (and inequality), trade and finance, environmental issues and climate change, economic cycles and instability, economic history, and the role of the state in promoting stability, growth and well-being. Training in mainstream and heterodox economics is available, so students who may have an intradisciplinary disciplinary interest in economics can be accommodated. While the range varies across the units, most provide some form of training on research methods and/or data analysis for students to garner empirical evidence to support their ideas.

Assessments of students' learning are influenced by the Australia's Tertiary Educational Quality and Standards Agency's (or TEQSA's) guidance on assessments and the University of Sydney's graduate qualities. TEQSA ensures providers of higher education meet the Higher Education Standards (HES) framework, so that learning outcomes are consistent with the levels of the Australian Qualification Framework (AQF). Learning outcomes need to be articulated clearly, and assessments provide opportunities for students to demonstrate their learning relative to outcomes.

There are different criteria for each level within the AQF (TEQSA 2021). According to the AQF, for a bachelor's degree, students must demonstrate theoretical knowledge and technical skills to prepare them for further learning (postgraduate degrees) or the job market (professional work). At the master's level, students must demonstrate specialised knowledge and skills and readiness for further study or professional work. The University of Sydney's stated graduate qualities are consistent with this guidance. They include depth of disciplinary expertise, critical thinking and problem solving, communication skills, cultural competence, interdisciplinary effectiveness, information and digital literacy, creativity, and so on (AQF 2013).

Each unit or course description is clear about what students can expect in terms of their professional, ethical and personal development. The graduate qualities are expressed as learning outcomes in each unit of study's materials and supported by rubrics to evaluate achievements. Each unit (or course) is designed to attain disciplinary expertise and assessments to demonstrate learning outcomes (and graduate qualities). Each academic has free reign to design a unit how she/he sees fit. The approach I take in a second-year unit on economic policy and the state is the most like Underwood's intradisciplinary unit on macroeconomics. While that unit

does not teach formal modelling, it does provide information on where and how to locate data and how to access them. Students are also asked to interpret visual presentations of data, while in-class tutorials provide opportunities to evaluate data related to the selected topics. If students seek additional empirical training, they can enroll in a third-year unit that studies economic cycles and instability to learn time-series techniques and indexing; or in a postgraduate unit that examines how checklists are compiled.

Assignments begin with an initial discussion and an (unmarked) survey to assess the range of skills and knowledge of the student cohort (the start of the cognitive map). The next assessment is typically a short essay that enables students to contrast differences in the concepts and theories presented in the first four weeks of the semester; and a multiple-choice quiz on that asks students to justify their responses, incorporating the relationship between vision, analysis and policy. The last assignment provides students with the opportunity to discuss issues at the cutting edge of theory and policy, such as what is the role of the state as capitalism's reliance on economic growth butts up against resistance because of climate change and severe inequality. The unit asks students to think more broadly about what constitutes human needs and how those needs can be met during an ecological transition. This creates an opportunity to consider contributions from indigenous cultures on how societies can provision themselves.

Evidence of effectiveness for learning is garnered through unit of study surveys and evaluations, occasional peer review, and personal reflections. The positive results are encouraging academics who may have been hesitant to use empirical techniques and data analysis to support learning to adopt the approach. Educational support staff have incorporated an applied component for training purposes. Each unit of study is adjusted in the following year to incorporate, where appropriate, student feedback. The graduates have obtained positions in national and state governments, think tanks, non-profit organisations, journalism, community and social work; and many have progressed to postgraduate programs to earn Master and Doctorate degrees.

The influence of AI

Some brief reflections on the influence of Artificial Intelligence are pertinent in drawing this article to a conclusion. When Underwood first published his intradisciplinary APE, AI was not as prevalent as it is today but now it is strongly under way, generating widespread debate on its implications and how it should be used in for teaching in academia. What are its implications for teaching and learning in a program like this?

TESQA suggests that students need to be technically savvy for entry into the workforce and for higher research. But, while AI has clear benefits in locating research material and editorial assistance, AI's interpretation of those research materials and its interpretations of data visualisation can be crude, if not outright incorrect. There is scope to incorporate it in teaching programs, but the extent seems to depend on the unit and the academic who designs the material. Fortunately, UNESCO has constructed AI Competency frameworks for teachers and students, showing how to use AI competently. While there are benefits of AI, there are risks. In education those risks include 'the reduction of teaching and learning processes to calculations and automated tasks in ways that devalue the role and influence of teachers and weakens their relationships to learners' (UNESCO 2024: 12). Education could be narrowed to suit the capabilities of AI. Key questions are how to define teachers' roles in this new context; how can AI enhance the interaction between teachers and students; and provide a basis for competencies and continuing professional development?

UNESCO's CFT, seeking to support the retention of a human-centered approach to education, has identified five dimensions for consideration: the human-centered mindset, the ethics of AI, the foundations and applications of AI, AI pedagogy, and AI for professional transformation. Each dimension has three levels of progression: acquire (knowledge), deepen and create. In effect, this provides fifteen competency blocks that individual academics can use to assess their skill level and create strategies for development. Their development, moreover, depends on their respective institutions' infrastructures and regulations, and provisions of opportunities to improve.

TESQA and the AQF stipulate students should develop digital literacy throughout their academic careers. The extension of this is to assist students develop AI literacy to prepare them for future work or research.

Staff need to be familiar with basic techniques, the ethical issues surrounding AI, human agency and collaboration and teaching aspects of what they've learned to others.

What does this mean for an interdisciplinary APE approach? Students need to be initially canvased for their experiences with AI. That is, what do they use AI for: how does AI add to their knowledge or skills; and what holds them back? Students can then be taught basic techniques to extend what they are learning in their units, including how to ask AI to locate material and viewpoints. It turns out that AI can assist students who are not technically adept at locating information and data, and may struggle with their interpretations, because of problems with the use of language. To successfully engage with AI, each individual, whether staff or student, needs to think of AI as a partner rather than a tool. Each individual's creativity may be enhanced by doing so. Types of activities that AI can facilitate include role-playing, hunting for specific pieces of information, and critical evaluation of output, all of which are integral features of the type of teaching and learning in an interdisciplinary APE program.

Conclusion

The limited empirical range within Underwood's *intra*disciplinary APE presumes a level of skill and analytical ability which not everyone has. People with specific modelling skills have greater influence over policy recommendations and their design. Moreover, Underwood's model is best suited for capitalist market economies because the constellation of theories it envelops were developed for that purpose. In contrast, *inter*disclipinary APE broadens the range of analysis from capitalist market economies to social provisioning more generally. It has the flexibility, then, to accommodate a wider range of socio-economic systems and countries, including those that retain a strong presence of informal economies. It recognises that social, historical, cultural, political and environmental contexts are just as important as production, consumption and distribution; and that the configurations of these elements vary across systems and nations. The *inter*disciplinary approach to APE provides space for students to employ other disciplines to analyse processes and phenomena according to what they perceive as the key dynamics needing to be addressed. Those averse to math can still engage while learning how to build robust, logical arguments needed to support their ideas.

In an era of climate change where solutions are needed for ecological transitions, this interdisciplinary APE approach pools knowledge on what works well from a variety of perspectives. Sustainable development will need a wide range of judgements and expertise to consider and solve issues related to social provisioning to provide for human needs within planetary boundaries.

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