
Foreword

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Biographical notes: Jack Reardon is a Professor at the School of Business at Hamline University. His research interests include energy and the environment, economic education and labour economics. His most recent book, *The Handbook of Pluralist Economics Education*, was published by Routledge in 2009. He is currently writing a principles of economics textbook to be published by Pluto Press in 2013.

Angel Asensio leads off this issue with his article ‘Recognition of fundamental uncertainty as a key to the heterodox economics scientific supremacy’. Today’s students are buffeted by uncertainty in every aspect of their lives: from whether a job awaits them after graduation, to how climate change will affect them. Traditional economics education does a disservice to students by not embracing uncertainty head-on and making it a central component of pedagogy. It attenuates the importance of the issue by focusing on risk (when outcomes and probabilities are known), while to a lesser extent ignoring uncertainty (where the outcomes are known, but probabilities are not) and completely ignoring radical uncertainty (when outcomes are not known and hence probabilities cannot be assigned) [Vant, (2005), pp.246–247]. As Keynes (1936, p.161) famously said,

“There is instability due to the characteristic of human nature that a large proportion of our positive activities depend on spontaneous optimism rather than on mathematical expectation, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as a result of animal spirits – of a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.”

But if uncertainty is pervasive, is not it non-sensical to emphasise the rational economic man calmly deciding which action to take on the basis of calculated costs and benefits? Indeed, a disconnect exists between the pervasive role of uncertainty in our lives and how neoclassical economics conceptualises reality.

Asensio argues that since heterodox economics recognises the existence of fundamental uncertainty, it offers a superior model of how our world works. By adopting fundamental uncertainty as a *modus operandi*, heterodox economics offers a more holistic concept of rationality while arguing against any *a priori* calls for market deregulation and the beneficent effects of perfect competition.

What role should mathematics play in economics and economics education? Mathematics is a tool to help conceptualise reality and should not be viewed as an end in itself, and thus it is important to ensure the mathematics used in economics is adequate

and relevant. Unfortunately, not only has neoclassical economics devolved “more and more into a branch of applied mathematics, where the aim is not to explore real processes and outcomes in the economic world, but to explore problems of mathematical technique for their own sake” [Hodgson, (1999), p.6], but neoclassical economics has misappropriated, misused and misunderstood mathematics [Keen, (2011), pp.402–411].

Jakob Kapeller and Stefan Steinerberger in their article ‘How formalism shapes perception: an experiment on mathematics as a language’ note that mathematics is ‘a language and that it is used in economics more than other social sciences’. To ascertain what this means for how students learn, the authors devised a simple Monty-Hall experiment in which all students were given the same problem but one group was given a verbally formulated solution and the other a mathematical solution; both solutions were correct – they only differed in language.

Based on their results, Kapeller and Steinerberger found that mathematics is not exactly neutral, objective, and might unnecessarily obscure rather than clarify, and that,

The mere presence of mathematics makes a problem seem more difficult, that mathematical knowledge is primarily attributed to specific training, that using mathematical expressions may decrease the proportion of people able to understand a certain argument and that a mathematical argument is more likely to convince men than women.

This can be problematic for economics education according to Kapeller and Steinerberger,

We might interpret the results as a cautionary tale and perhaps as a warning not to start introductory or intermediate courses in economic theory with a large list of ‘basic formulas’ (as some textbooks tend to do). Instead ... let the student see what economics is really about, namely economic problems (like unemployment, poverty, etc.) before going into mathematical details. On the other hand, an increase in mathematical literacy ... might well lead to an increased skepticism with regards to the traditional mathematical apparatus used in neoclassical economics. [This could] potentially rais[e] awareness for alternative mathematical techniques thereby fostering a pluralist approach to economics.

This paper meshes well with an earlier paper published in the *IJPEE* (Giannakouros and Chen, 2012). The authors proffered an effective method to “equip students with appropriate intellectual tools for dealing with mathematics enabling student empowerment and the demystification of mathematics” [Giannakouros and Chen, (2012), p.120]. Given the concern of heterodox economics with how we provision and the focus on evolutionary change, our students should be taught more sophisticated mathematics such as differential equations (Keen, 2009).

The principles of economics textbook has been much maligned, particularly by heterodox economists and for good reason as Fullbrook (2010, p.95) notes,

With few exceptions [students’] textbooks fundamentally shape how they think about economics and economic issues for the rest of their lives. As such, these books are a powerful and long-lasting cultural and political force. And of course their influence extends to the economics profession itself, because these textbooks also serve as the formative introduction to economics of that small minority of students who go on to become economists... Given their highly ideological nature which at times strives more to proselytize than to educate it is not surprising that economics textbooks ... along with “university departments, associations, journals, classification systems, and its basic narrative, collectively and interactively block any effort at meaningful reform”.

Given our objective at the *IJPEE* to reform and reconceptualise economics education, it is incumbent to critically investigate the content of principles of economics textbooks. Veronika Dolar in her article ‘The treatment of minimum wage in undergraduate economics textbooks revisited’ investigates the treatment, coverage and discussion of the minimum wage in 25 principles of economics textbooks. She finds current textbooks incomplete and inadequate. Staying largely within the confines of the neoclassical paradigm, she provides several insights which expand the traditional view while offering critiques of existing texts. She also provides a rich bibliography of current research on the minimum wage.

This is the second survey of principle textbooks published in the *IJPEE*. The first surveyed the sustainability content of principles texts (Green, 2012). Readers are invited to submit manuscripts investigating any aspect of principles of economics textbooks or textbooks at any level.

Many of us have directly experienced the impact of declining budgets forcing larger class sizes, with the concomitant tendency towards objective testing and assessment, specifically multiple choice testing. How can we encourage (and assign) creative writing without losing our sanity? Unfortunately given tight budgets, large classes are not going to go away; yet at the same, it is important for our students to learn how to write.

Brinda Mahalingam, in her article, ‘Revival of essay writing in economics’ offers some hope. She proffers suggestions on how to encourage writing within the context of large classes including using specifically designed computer software. While promising, it is not perfect and needs further development. She concludes, “We know from experience that when writing is part of the curriculum, students acquire a deeper understanding of economic phenomena. Thus writing assessment programs can improve and enhance the course experience for the students in large classes.”

The *IJPEE* encourages readers to submit papers detailing experience with large classes. Any specific suggestions for encouraging creative writing and critical thinking? What has been your experience with computer software?

If Wall Street was run by women could the recent financial crisis been averted? Would there have been less excessive risk-taking and more cooperative behaviour? Julie Nelson in her perceptive essay ‘Would women leaders have prevented the global financial crisis?’ Teaching critical thinking by questioning a question’ argues that this is the wrong question. Nelson explains, “The question, as posed, seems to require either an answer of “Yes – sex differences in traits are important” or the answer “No – gender is irrelevant.” Nelson’s paper questions the question itself – a necessary and fruitful step in encouraging critical thinking. After perusing the empirical evidence on differences between the sexes she concludes, “The idea that women would ‘bring something different’ to finance is dangerous because it exaggerates sex differences in behavior far beyond the degree supported by research [and] neither masculine-stereotyped traits nor feminine-stereotyped traits are, alone, sufficient to make a wise and competent financial leader.”

Dennis Badeen’s article ‘Ontology, pluralism, and economics education’ concludes this issue with an insightful discussion of the role of ontology in a pluralist economics education. Ontology is a branch of metaphysics that investigates the nature of being. Explicit focus on ontology can help us evaluate the connection of a given theory to real-world issues and capitalist economies. This is important given the critique that neoclassical economics “is essentially neither pro-market nor anti-market [since] it has no

adequate theory of markets at all. It would be more accurate to say that neoclassical theory was blind to the real market, and consequently to its real virtues or its vices” [Hodgson, (1999), p.32]. In reforming economics education, Badeen argues convincingly that “ontology should be a guiding thread because ontology provides a basis for comparing theories and the means by which students may critically engage with a variety of theories.”

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