

How different is heterodox economists' thinking on teaching? A contrastive evaluation of interview data

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Abstract

This paper explores how differently heterodox and mainstream economists think about teaching. It draws on data from interviews with sixteen leading heterodox economists, which we analyse according to the principles of thematic analysis. We find considerable variety in heterodoxy. Further, we find evidence that suggests at least some heterodox economists share some elements with mainstream counterparts: on pedagogical practice, the role of their teachers, and scant explicit knowledge of educational philosophy. However, we discover different heterodox educational goals when compared to mainstream peers, mainly clustered around a concern for more radical open-mindedness and free-thinking. Also, some of our respondents showed a commitment to pluralism and critical approach to reality in teaching. Our interviews suggest that heterodox pedagogy is a reaction against and struggle within a uniquely hierarchical and monist discipline, pointing to the sociology and ideology of the economics profession as a shaping factor. We conclude that these characteristics make heterodox pedagogy better suited to foster understanding of complex real-world economic crises associated with global warming, pandemics, and financial meltdown.

Keywords: heterodox economics; interviews; teaching economics; educational philosophy; pluralism

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1. Introduction

This paper explores heterodox economics ideas on teaching. The global financial crisis sparked strong criticism of economics, including calls for its teaching to change fundamentally. Subsequently, some changes to economics teaching were proposed and implemented; however, critics argue that these are insufficient, particularly in failing to recognise and make explicit the plural, social, political, ecological and ethical nature of economics (see, *inter alia* Morgan, et al. 2014; Morgan 2015; Earle, et al. 2016; Mearman, et al. 2018a, 2018b). These and other critics attribute this inertia to the sociology of economics, one characterised as overly hierarchical (Fourcade, et al. 2015) and dominated by a mainstream. Calls for a new approach will likely amplify during the ongoing COVID-19 crisis, another multi-dimensional event rooted in everyday practice and power relations, which requires a broader way of thinking than that offered by conventional economics. Collectively, these criticisms suggest that 'heterodox' approaches to economics teaching might be better, educationally and hence societally (see, *inter alia* Dow 2009; Decker, et al. 2018).

To explore a heterodox economics approach to pedagogy, we conducted semi-structured interviews¹ with a sample of individuals we categorised as 'senior heterodox economists'. Thus, we hold that the nature of our sample means we can explore a heterodox economics approach to teaching. Reflecting extant literature, the interviews explored broad contours of heterodox economics, which are discussed in Mearman, et al. (2019b). However, here we focus on questions we posed our subjects about their approach to teaching, a significant area in which heterodox economists have made useful contributions, particularly in advocating pluralism (Dow 2009; Freeman 2009; Garnett, et al. 2009). Our findings are the product of an investigator triangulation (Downward and Mearman (2007) of analyses of interview text, conducted according to the principles of *thematic analysis*, a qualitative framework. Thematic analysis is a flexible 'method for identifying, analysing and reporting patterns (themes) within data' (Braun and Clarke 2006, p. 79) not tied to, but consistent with a number of methodological frameworks. Our approach allows themes to emerge in our thinking about the data via a dialectic between the authors.

We find considerable variety within our group of economists. Further, via a contrast with existing interviews with leading mainstream scholars, we find evidence which suggests heterodox economists share elements of practice with mainstream counterparts: a concern for transmission of ideas (albeit different ones), some evidence of instrumental education, a care for their profession, an enjoyment of learning while teaching, and the enjoyment of seeing students learn. Moreover, we see little explicit knowledge of educational philosophy or theory of the learner. However, we do find evidence of educational goals different from the mainstream, clustered around a concern in teaching for a pluralism of ideas, free-thinking and open-mindedness towards ideas outside of the mainstream. This approach often stems from the economists' personal experience as students, whether good or bad, a rejection of

¹ See the appendix for a list of names. We present the interviews in full in Mearman, et al (2019a). Hence, the responses are not anonymised.

the standard textbook approach to economics, and a vision of the socially, ecologically, and ethically conscientious economist.

The paper proceeds as follows: in section 2 we offer commentary on pre-existing literature on how mainstream and heterodox economics think about teaching. In section 3 we present our findings from the interviews we have conducted with leading heterodox figures, using pre-existing mainstream interviews for contrast.

2. Teaching of economics: mainstream vs heterodoxy

A key issue when defining heterodoxy is its relation to what is defined as ‘mainstream’ economics. For some commentators, heterodox economics is analytically oppositional to some orthodoxy or mainstream (Lawson 2006 *et passim*) or just different (Lee, 2012). Some critics object that this oppositional stance is unfounded, presupposing an over-simplified notion of the mainstream that ignores the actual diversity of mainstream economic research (Colander 2000; Colander, Holt and Rosser 2004b; Cedrini and Fontana 2017). Others instead regard heterodoxy positively, as a free-standing alternative (Kvangraven and Alves 2019). Yet others regard heterodox and mainstream as segments of a spectrum with blending boundaries (Wrenn 2007). The paper is agnostic on this question, as its aim is to explore the dimensions of a heterodox approach to teaching; however, whatever the relation between mainstream and heterodox is, it is useful first to sketch how we conceptualise the ‘mainstream’.

Following Dequech (2007-8) we note that mainstream can be defined *intellectually* and *sociologically*. The intellectual refers to concepts and methods that are held to be core. The core concepts derive largely from neoclassical economics: *inter alia* methodological individualism, (for consumers) subjective utility maximisation, equilibrium, and the fundamental efficacy of markets, what Marglin (2009) describes as their logic. Reality is studied in terms of deviations from theoretical models, derived mathematically. Statistical analysis is also generally required. These core principles dictate the type of work published in the highest ranked journals. Those making the decisions on these journals, and thence those able to publish in them, are then the most powerful: they then drive the sociology of the profession.

In terms of teaching, first let us consider the *sociological* dimension. A key sub-disciplinary body is the American Economic Association, and specifically its Committee on Economics Education. Chairs of this committee have included Sam Allgood, Kim-Marie McGoldrick, John Siegfried, William Walstad, and Michael Watts. Accordingly, notable contributions in this field have been Siegfried, et al (1991), Salemi and Siegfried (1999), Allgood, Walstad and Siegfried (2015) and the Teagle Foundation report into undergraduate education (Colander and McGoldrick, 2009). The most prestigious outlets in this field are the *American Economic Review*, the *Journal of Economic Literature*, and the *Journal of Economic Education* (JEE). Of those named above, all but Watts are currently JEE editorial board members.

To consider the *intellectual* aspect of the mainstream approach to teaching, we draw on the long-standing debate within in educational literature between stressing the content (the ‘what’) and the process (the ‘how’) of teaching (Helburn 1997). Also, following Clarke and

Mearman (2001) we ask about the goals of education (the 'why'), a question which precedes the 'how' and 'what'. They discuss a liberal approach to education (Bridges, 1992), which focuses on the development of the autonomous individual endowed with the capacities of analytical, critical and comparative thinking. They contrast this with an instrumental approach to education, which focuses on the training of students in a set of skills, for a given set of purposes.

According to Clarke and Mearman (2001), mainstream economics focuses on the process (the 'how') of teaching, largely because it sees its content as mainly sound. Certainly, there has been considerable discussion of content (see Siegfried, et al, 1991). However, most of this has focused on the question of 'breadth' versus 'depth'. The problem is, as Hansen (2009) puts it, "students are stuffed with content knowledge but graduate without knowing how to use that knowledge" (107). Colander and McGoldrick (2009) do argue for greater prominence for 'big think' questions. More recently, the CORE Project (see Bowles and Carlin, 2020) has stressed more student engagement with such questions and related data; however, critics maintain CORE remains weak in terms of pluralism of perspectives and therefore on diversifying content (Morgan, 2014). Generally, then, mainstream teaching content tends to be monist, i.e. reflect only the tenets of mainstream economics listed above. Consequently, as shown in Allgood, et al (2015) the majority of economics education research is on the process or efficacy of teaching techniques, such as facilitating better engagement of students with mathematical and other technical material. This is justified with a reference to 'best-practice' in highly ranked economics departments, 'rigorous' textbooks, institutional 'accreditation' criteria, and the need to prepare students for graduate programmes and for the job market for economists.

Clarke and Mearman (2001) argue further, in terms of underlying educational philosophy, that the mainstream literature neglects *explicit* discussion of educational goals, or learning theory. As Watts (2009, p. xx) notes, perhaps optimistically, that those who are "seriously concerned about undergraduate liberal education – which is perhaps not the majority group of US academic economists, but is certainly a large and important group". Less optimistically, Klammer and Colander (2019) bemoans the lack of engagement with their work on how economists are made. However, clearly there is mainstream work on educational goals. Siegfried et al (1991) investigate what the economics major should achieve. Thoma (1993) has explored the framework of Perry (1970), as Earl (2000) did from a heterodox perspective. Hansen (1986) has drawn on Bloom, et al (1956) to design a proficiencies-based economics curriculum.

Mainstream literature has considered explicitly liberal education. Colander and McGoldrick (2009) offer a substantial critique of economics majors as not achieving the goals of liberal education, because, they claim, of the graduate training economists receive, the structure of colleges and universities, and the incentive structures within the economics discipline. Siegfried (2009, p. 215) acknowledges that the recommendation of his (1991) report to 'enable students to develop a capacity to think like an economist' was subverted to become 'teach students to think like an economist'. He subsequently recommended that teaching should "enable students to understand how to think like an economist when such thinking is appropriate" (215).

The weakness in these treatments is that they do not consider how the nature of mainstream economics and its teaching militates against liberal education. This action is, in our view, a product of monism, i.e. an overly rigid proscription of economics. As Bateman (2009) notes, they do not consider that the culture of economics might militate against liberal education – because mainstream economics provides no framework in which to do this. Similarly, Marglin (2009) argues that economics does not ask fundamental questions, such as about the governing logic of markets, i.e. rather than merely their operation. More fundamentally, Garnett (2009: p. 59) claims that Colander and McGoldrick “never articulate...the idea that...college-level educators have an academic duty...to cultivate their student’s capacities for intellectual autonomy and judgment”. That follows because the tenets of mainstream economics cannot be challenged. Rather than admitting social, political, ethical and ecological aspects into economics, these are kept outside, to be admitted only via disciplinary pluralism, perhaps via general education (Colander, 2014).

Overall, then, mainstream economics as a whole does not engage much *explicitly* with ‘why’ questions of teaching. When it does so, it is in a way that militates against liberal education. Consequently, it *implicitly* adopts an *instrumental* approach (Clarke and Mearman 2001, 2003). That is, its economics teaching focuses on teaching a relatively narrow set of skills and techniques, embedded in a (mainstream) monist theoretical apparatus and conceptual vocabulary. An extension of that is to describe mainstream teaching as *instrumentalist*, directed to a wider aim such as the reproduction of mainstream economics or of capitalist relations. Arguably, these claims stand, despite well-publicised changes to economics teaching (Mearman et al. 2018a, 2018b).

If heterodox economics is oppositional, or at least it offers something different from the mainstream, it seems likely that heterodox approaches to teaching economics would differ too. Not surprisingly, though, the literature does not identify any single heterodox approach to teaching and learning; however, heterodox economists have made several interventions in pedagogy. Using the triad of content, process and goals, we make two claims about heterodox economics teaching.

First, in contrast to mainstream literature, heterodox contributions typically focus more on *content*, i.e. challenging the mainstream canon with contending perspectives, often implying fundamental alternatives for understanding the economy. Second, consequently much of the heterodox literature advocates greater pluralism in content *and* process of economics teaching. Significantly, many of these contributions argue that pluralism has educational benefits. Theoretical concepts and methodological approaches from heterodoxy generally, or from specific schools of thought, encourage the development of key cognitive skills as well as open-mindedness and tolerance (Nesiba 2012; PCES 2015). These faculties are, according to Bridges (1992) the mark of an educated mind. Further, the complexity of the world and humans’ limited ability to understand it suggest that one perspective may not be sufficient (see Morgan, et al. 2014). Another rationale for pluralism might be epistemological caution or fallibilism, because it recognises that any theory is likely to be incomplete and limited (Mariyani-Squire and Moussa 2014). To be effective, economists need a ‘bigger toolbox’ (Nelson 2011). Hence, pluralism may aid skill formation and therefore make graduates more employable (O’Donnell 2009). Students may even understand the mainstream better if heterodox principles are also taught (Clarke and Mearman 2003).

Second, as with mainstream economics, heterodox work on teaching is not widely known or discussed. Nonetheless, heterodox economists have explicitly engaged with educational philosophy to design and evaluate their courses. Barone (1991) overtly recognises the heterogeneity of students. Petersen and McGoldrick (2009) link service-learning methods to the achievement of their educational goals. Several authors utilise educational psychology of Perry (1970) in their discussion: *inter alia*, Lapidus (2011), Earl (2000), and Barone (2011). Another strand of this work is around liberal pedagogy, which envisages education as a process of allowing students to develop into analytical, critical, autonomous thinkers (Morgan et al. 2014; Earle et al. 2016). Finally, some heterodox authors engage with the critical or radical pedagogy associated with Freire (1970), in which education is achieved via critical engagement with one's own situation and surrounding power structures. Bridges and Hartmann (1975), for example, apply this radical pedagogy to note the hierarchical nature of teaching but also stress the problems facing women teachers in establishing their credibility in a masculinist system (see also Shackleford, 1992).

Overall, based on the literature discussed briefly here, we aver that relative to mainstreamers heterodox economists pay relatively more explicit attention to problems with pedagogy, reacting in many cases to perceived problems with mainstream economics, as canonised by the dominating textbooks (see Berger 2019), the structure of the core-curriculum, and academic departments, all of which reflect the power-structure of the profession. Thus, heterodox economists show relatively greater awareness and knowledge of pedagogy. They also advocate a relatively more pluralist or open mind-set.

If heterodox economics sees itself as different from and critical of the mainstream, one might expect our interviews to reveal explicit attention to educational philosophy and theories of learning; adopt liberal, critical or radical educational goals; and be pluralist. Yet, if heterodox economics shares elements with mainstream economics, one might expect our research to find elements in common.

3. Evaluation of comparative interview data

To explore heterodox economics approach to teaching, we conducted semi-structured interviews with a sample of individuals we categorised as 'senior heterodox economists'². The sample was constructed partly by convenience, via existing networks, and was limited by interviewee availability: several invited interviewees were unable to participate. The sample was also purposive, in that we aimed to achieve a spread in terms of geography, theoretical tradition, teaching experience and gender. We achieved a geographical spread of economists: nine of them are based in the UK and USA combined; but we also had representation from South America, Asia and mainland Europe. Also, chose our interviewees to reflect different theoretical traditions in heterodox economics³. Our interviewees mostly have considerable experience of undergraduate and graduate teaching (although all have teaching experience or have written about curriculum). Finally, five of the sixteen interviewees were women, which is a higher proportion than found in the upper echelons of the profession.

² Hereon, we refer to interviewees simply by name. A list of interviews is in the appendix. Fuller citations are used for exact quotations.

At this point, some caveats should be noted. Clearly, our interviews only captured a specific subset of heterodox economists, defined by age and rank, who have survived despite the sociology of economics arguably being loaded against them. Also, unlike those in Bowmaker (2010), the interviews were not exclusively about teaching. In defence of our interviewees, some of them have written about teaching (e.g. Nelson 2009) and know more about educational theory and practice than emerges in the interviews. Finally, not all interviewees are teachers in academia (although all have teaching experience or have written about curriculum), not all agree on the definition of mainstream economics, or accept the label heterodox, and not all of them practice pluralist pedagogy to the same degree. Overall, our interviews exhibited variety on most points, albeit not one explicable systematically by location, gender or specific heterodox orientation.

To facilitate our analysis, we have juxtaposed material from our interviews with that from texts of interviews with leading mainstream thinkers (Snowdon and Vane 1999; Colander Holt and Rosser 2004). In particular, we draw from the conversations in Bowmaker (2010) which are explicitly about teaching and implicitly with leading teachers. In both cases, our samples are neither random nor representative in the traditional sense of confirming or allowing inferences to a population. Nonetheless, we hold that the nature of our sample means we can capture key characteristics of heterodox economics. Not least, because of their position within the community, these economists' views are likely to be performative.

We now present our findings. We identified three main themes: influences of experiences and teachers; a range of educational goals; and a commitment to pluralism. These will now be discussed in order.

3.1 Influence of student experience and teachers

Biographical interviews with mainstream economists often reveal that their career path has not resulted from some grand plan, but from circumstance or a chance meeting. As Frank (2004, p. 111) puts it, 'I think of my career as a sequence of unplanned accidents'. Frequently, their formative experiences led them into economics. Some were affected by the Great Depression or Second World War (Friedman, Solow, Tobin, all 1999), others by the Vietnam War (Gintis, Brock, Foley, all 2004). Others cite family travel (Grossman), living in Africa (Easterly), urban living (Glaeser), talking to parents (Mishkin), experience of protest (Eichengreen), or being raised by economists (Glaeser, Gordon, Friedman) (see Bowmaker 2010, p. xiii) as affecting their choices. In many cases, these experiences created a determination to use economics to improve the world.

Crucially, a final key influence is that of their own teachers, or their own learning experience (McCloskey, Foley, 2004). In existing interviews, teaching environments – and particularly the heroic teachers who inspired subjects – had certain key qualities. For instance, Lucas (1999, p. 146) cites Friedman as a great teacher, able to show the power of economic analysis (see also Romer, 1999). Others discuss how they learned the importance of engaging students (Clower 1999; Polak 2010). Others mention the 'quiet intensity' (Frank 2010, p. 5), discipline and well-preparedness (Taylor 2010, p. 26), seriousness (Hamermesh 2010), 'extreme clarity'

(Gordon 2010, p. 58; see Polak 2010) of key teachers, or of their being ‘fantastically helpful and inspirational’ (Landbsurg 2010, p. 44).

For our interviewees, whilst many of these themes are replicated, we also see different currents. For instance, some attribute their choice to an unplanned decision, or ‘accident’, (Carvalho, Shaikh, Mongiovi), suggesting that their decisions to become heterodox was consequential, rather than an aprioristic choice. Beyond this, ‘traditional’ forces act: family influence (e.g. Charusheela), social class (e.g. Ura) and religion (e.g. Nelson, Ura) were identified as primary determinants in pursuing an economics career. Also, their generational background, such as being part of the newly politically aware 1968 generation (Carvalho, Darity, Witt), influenced their choices. Echoing previous literature, some saw in economics the opportunity to be able to explore other interests and understand certain issues of the real world, giving a certain ‘practicality’ to it (Witt) or stimulating critical thinking (Chick). In the context of this paper, an important question is how these various influences affected their teaching style as well as their decision to take a heterodox turn.

For most, an important contribution to their current outlook – or at least something which resonates with it – is an early exposure to certain character traits and/or structural features of teaching. Charusheela (p. 68) describes how at Miranda College (New Delhi), as well as reading Samuelson, students were required to ‘read the original writings as undergraduates (not just a few of the obvious ones like Keynes). I think that made a difference, I began to see it as a field’. Carvalho (p. 39) described seeing leading scholars engage in serious discussion, which he found formative: ‘For us, the students, that was amazing because we were not used to witness heated debates like that’. For others, though, debate was a normal part of study. Dow’s training at St Andrews’ political economy programme was one example, perhaps reflecting ‘a Scottish tradition, which is that argument is normal; I don’t mean fisticuffs argument, I mean debate. It’s just a normal feature of social life’ (p. 24). Similarly, Chick describes one class at Berkeley, in which students simply sat down, ‘working it out’ (p. 247): thus, for her, rote learning was alien.

Other interviewees had more mixed experiences, including some negative instances that proved to be significant for their development. Witt describes his home department as being dominated by mainstream economists, meaning that he was ‘brought up with the usual standard textbooks that I had a hard time to find interesting’ (p. 276), ultimately leading him to seek an alternative direction. Darity recalls being inspired by a teacher who ‘was somewhat of a provocateur, and he would give us readings that were in some ways critical of the materials that were being presented in the mass lecture’ (p. 50). Charusheela contrasted her graduate experience with her undergraduate in which economics ‘was often presented to me in my early days, as a field where everybody knows what the questions and approaches are’ (p. 74). Consequently, in her view, ‘[i]t’s a disservice to the coming generations if we present economics in [that] way’ (p. 74).

Sent also describes a mixed experience at Stanford. On the one hand, Thomas Sargent ‘would write three equations on the blackboard and he would say “this is the economy. I am not going to talk to you about *how* this is the economy, *why* this is the economy, *in what sense* this is the economy, but I am very happy to help you with the mathematics, with multiplying matrices, so on and so forth.” And that is when I decided this is not going to help me as a

politician' (p. 173). Kenneth Arrow, in contrast, chose 'to nurture somebody who is willing step outside and be critical, ask questions that other fellow students were not willing to ask' (p. 175). Similarly, Mongiovi describes an early teacher as 'a monetarist, a terrific teacher, and an open-minded person' (p. 188). Yet, another, who said to him "'Well I think that's a very naïve way to think about the economy.'" ... I didn't know anything; but I knew enough to realise that if this guy thinks I'm naïve for asking about power, there's a real problem with the way he's approaching his subject' (p. 187). Significantly, these experiences appear to have shaped Sent and Mongiovi's own approach to economics and to teaching, emphasising conversation and debate.

Overall, some differences exist between mainstream interviewees and our respondents. Whilst both sets praise 'good teachers' and good courses, the definition of 'good' may differ. Whilst both mainstream and heterodox value clarity, engagement and illumination from teaching, our interviewees seem to be attracted more to teachers who embody open-mindedness, a process of critical questioning of all ideas, including the mainstream, and engaging with debates. They may also have come from environments in which debate over fundamentals was normal and/or encouraged. Significantly, heterodox interviewees often reacted against the negative experience of mainstream teaching, searching for and committing themselves to alternatives, which are often paradigmatically and fundamentally different rather than only different in minor details. These strands can be seen further in respondents' positions on educational goals (3.2); and pluralism (3.3).

3.2 Educational philosophy and goals of teaching

A theme emerging from both sets of interviews is the importance of understanding and/or explanation in learning and teaching. Helping students to understand a theory is foundational to their ability to apply or evaluate it. Nelson confesses that 'I'm a good teacher but I'm not as good as I would like to be. I enjoy the students where I can see a lightbulb go on and they start to think and see things in a new way. It doesn't happen as often as I would like' (p. 125). Nelson's invocation of the lightbulb metaphor is significant because it appears in mainstream interviews, such as in Hamermesh (2010, p. 198) and Polak (2010, p. 82). List captures the meaning well: 'So when I'm presenting a difficult concept that I can tell people are having trouble grasping, if you can see the [lightbulb] turn on, that is the most gratifying experience that I can think of in the classroom. You're teaching students a different way to think about problems and a different way to attack the very fundamental questions that face mankind' (List 2010, pp. 303-4).

As noted in section 2, mainstream economics education may be judged 'instrumental'. Indeed, in Bowmaker's question to interviewees, he takes an (unacknowledged) implicitly instrumental stance: 'How do you assess whether the students are *learning the material*?' (2010, p. xi, emphasis added). It is therefore unsurprising that many of the interviewees respond along these lines, stressing learning specific concepts or techniques, or more generally, learning means understanding what they have been told. Accordingly, a premium is often placed on transmitting effectively knowledge to students. Frank and Hamermesh both stress the value of repetition or rote. Others, though, explicitly reject the method of transmission, stressing instead playfulness (Landsburg, Taylor), a Socratic method, co-creation of curriculum and experimentation (List).

Some, but fewer, interviewees hint at liberal educational goals, for instance equipping students to develop intellectual capabilities, such as creativity (Landsburg, p. 46). For Easterly, '...a good intellectual and a well-educated person is someone who is inherently very sceptical' (p. 362). More often, though, respondents took intellectual capabilities in a more limited way, such as Taylor, whose example was to 'solve and work with a model to describe what would happen with different types of monetary and fiscal policy actions' (p. 37; see also Laibson, p. 132); or Frank, for whom 'the cost-benefit principle is the bedrock of critical thinking' (p. 19).

The vast majority of the interviewees in Bowmaker (2010) show little *explicit* evidence of knowledge of educational philosophy. Further, Bowmaker poses and answers a key question: 'But do the economists have a formal understanding of how humans learn? The majority do not. In fact it is the one question that many struggle to answer' (p. xvi). Indeed, many of them (Taylor, Polak) explicitly acknowledge that they do not. Greene even said that 'I have to admit that I haven't really thought about this one [how humans learn]' (p. 105). Others (for example, Landsburg, p. 45) cite debunked notions, for example 'learning styles'. This may reflect a lack of training of economists about teaching (Hamermesh, p. 198). Again, these findings support those reported in section 2: Colander and McGoldrick (2009) convey a frustration that efforts to teach economics consistently with liberal education are thwarted by the wrong incentives within the profession.

How different are our interviews? Our interviewees share the goal of helping students understand. Steppacher aims 'to have good content to my teaching, passing on credible views as working truths which can be integrated into the questions of these young minds, integrated in a way that has a foundational substance for their future' (p. 107). Further, Dequech states that '[w]hat I want to achieve is to help students understand economic issues better, this is the general objective' (p. 273). In this respect, facts remain important: 'it's absolutely essential that I can give the students as accurate a reading on the historical record as possible, because there is so much distortion about that historical record, and I have to be able to demonstrate to them why I think one piece of evidence completely dominates another piece of evidence' (Darity, p. 63).

Another shared perception of commentators on both sides is that students' failure to understand results from a failure to explain or transmit material properly. Both mainstream and heterodox economists advise that a key root of understanding is engagement, so some existing interviews stress the importance of being entertaining and inspirational teaching. We see this in some of our respondents. Starkly, Ura defines teaching as 'a concentrated delivery of knowledge in a scheduled time between the lecturer and the audience' (p. 91). Again, though, this time needs to be stimulating: '...we endeavour to educate people while being entertained for one hour. (...) So the method and the moment itself have to be pleasing experience to the audience' (pp. 91-92). Therefore, 'here I take the opportunity of being an artist rather than an economist. During preparation of visuals I take the view that an image that burns into human memory is far more effective than exhaustive monologues of lecture' (p. 91) (see also Nelson, Chick). For others, though, the teaching and learning process is a reciprocal process of excitement, enjoyment and understanding between student and teacher: 'I basically want to make an intellectual offer, a proposal for how to explain economic reality, and what I can accomplish with making this offer depends on the students' (Witt p.

284). 'Through their questions and comments, they also force me to improve my ideas, so I learn a lot from them and I enjoy this' (Dequech p. 272; see also Darity).

However, understanding and explanation may carry very different meanings and serve different objectives depending on the educational philosophies and goals of teaching (see section 2) held by teachers. Our interviews reveal elements of liberal or critical pedagogy. For example, Mongiovi wants to furnish his students with a clear understanding, in order to empower them to debate others: 'So I'd rather, explain to them the [conventional] argument, tell them why I think it is seriously flawed, and then at least they're not going into that kind of a conversation unarmed' (p. 202). One might ask here: to what end? One possible answer is to equip students with the capacities of real-world understanding and critical thinking to become autonomous engaged citizens able to grasp and then change their own situations. This approach is best summed up by Chick:

'But what I wanted to do, above everything else, was to get students to think for themselves... to encourage students to be self-reliant and able and confident enough to think for themselves. ... You want a student who can go to the library and follow some footnotes and chase something up and be curiosity-driven and able to fulfil that curiosity without being taken by the hand and led anywhere. That, to me, is what teaching should be about. I don't actually care terribly much what they learn as long as they learn that, because then they can go on learning for the rest of their life' (p. 248).

Thus, the goals of teaching are open-mindedness (Nelson), critical thinking (Dequech, Steppacher), thinking *independently* about the world (Darity, Dow, Chick Mongiovi), creativity, originality and meaning (Steppacher). These all help unlock students' potential: 'It is our privilege to let such students develop under our guidance, so that which was previously unformed, if not actively suppressed, is mobilized within a supportive environment. This nurturing process of students is as important as their grades' (Steppacher pp. 106-107).

We also find greater emphasis in our interviews on achieving and transmitting a good (i.e. unbiased and correct) understanding of *real-world economic problems*. Of which problems and for what purpose? Here our interviewees cite a number of social, ecological, and ethical issues. Similar to Darity, above, whose concern was racial inequality, Charusheela wants her students 'to understand something about how feminist economics lets them understand gender dynamics in the household' (p. 80). More broadly, Mongiovi aims to 'introduce [students] to the idea that... [economics is] also a form of ideology, it's a way of embedding ways of thinking in your brains that reinforce the power relations of the system that we live in' (p. 202). Similarly, Steppacher 'wanted to give students the chance to see things critically, [and] ... an understanding of how the economy works in ecological and social contexts and how our economic behaviour affects future generations' (p. 102). Thus, for Nelson, ultimately 'economists should be dealing with things like inequality and climate change, the big questions' (p. 121), in the tradition of classical political economy. Therefore, social change appears as a governing goal, including helping 'students who come from relatively disadvantaged backgrounds can get a really good education[and] really move up. Getting up in the morning to teach the children of the elite to be the next elite does not inspire me' (Nelson pp. 125-6).

In sum, this concern for openness, criticality, meaning, facts and their correct representation with societal change in mind often leads to alienation from mainstream textbooks: 'I don't feel when I'm teaching the Keynesian cross model that I am conveying misinformation; whereas almost from start to finish with the micro course, I feel like I am misleading them about how the world works' (Mongiovi p. 200). For heterodox economists this feeling of alienation is not unusual, since typical economics programmes are predominantly mainstream, expecting instructors to teach the neoclassical economics textbook content. Such alienation and, in the extreme case, even refusal to teach mainstream economics textbooks uncritically may be one of the most important foundations of heterodox economics, providing much of its motivation for fundamental dissent. Witt (p. 280) even describes the different heterodox economics schools of thought as differently motivated oppositions to the canonical textbook version of economics.

Yet, as discussed in section 3.3, several interviewees commonly avow pluralism in economics, and in teaching it, which can result in heterodox economists teaching mainstream economics with or without taking a critical approach to it. Or, they distance themselves from the mainstream material by referring to 'what *economists* say'. This apparent contradiction can be explained in terms of mere practicality, i.e. the need for income, and fears of losing this income if one objects to institutional expectations to teach mainstream content (uncritically). It can also be rationalised if the economist believes the mainstream material may offer some truth, albeit limited. Nelson addresses this as 'teaching what people feel like they need to teach but without the brainwashing aspects' (p. 123). Pluralism can further be justified by a liberal philosophy, in which knowledge of facts, or training, may be a by-product but are not the goal of educator. Rather, the educator aims that students become autonomous, critical thinkers.

Taken together this begs the question as to whether our heterodox economists show relatively more explicit commitment to educational goals and/or any awareness of educational philosophy or learning theory. Indeed, within our interviews, we identify various goals of education held by our respondents. Now, many of the above goals of teaching *can* be aligned with specific philosophical positions; however, this is not equivalent to identifying conscious engagement with philosophy or learning theory. Indeed, in our data set, evidence for engagement with this material is limited, arguably no greater than in mainstream interviews.

Similarly, our subjects do show some understanding of how learning occurs. Sent (p. 185) refers explicitly to the notion of *Bildung*, i.e. the process by which minded beings come to be (see Bakhurst, 2011). Nelson aims that her students are '[a]ctually just basically doing things like reading' (p. 127) and she claims that she 'was trying to challenge [students] to actually expand their vocabularies and read more difficult texts' (*ibid.*). This suggests, in line with Bloom (1964), that certain foundational skills are necessary before higher level capacities, such as criticality, can develop. Beyond this some claim they adopt the Socratic method (Dequech, Witt). Others recognise the 'affective domain' of learning: Lawson notes that 'To have someone at the front telling them it's all a waste of their time, just didn't seem to me to be psychologically facilitating' (p. 150). Steppacher refers to the psychological dimension of teaching and learning when he mentions students' fears of critiquing and giving up

mainstream ideas and the need to provide alternatives that are meaningful from the perspective of the students.

Overall, like mainstream interviewees our respondents do not exhibit explicit evidence of training about learning or teaching technique. This possibly reflects their seniority, emerging from an older training regime: a situation bemoaned by Frank: 'All of the focus in our graduate instruction is on mastering the details of the discipline itself, and then we just hope that once you're put in front of a group of students you can somehow transmit relevant information to them. That seems an odd posture to strike when you think about it' (2010, p. 7). Given the influence of teachers (section 3.1) who themselves betrayed no or little training in pedagogy this state of affairs may actually not be so surprising. Moreover, if the sociology of the discipline does not reward engagement with educational literature, it is predictable that our economists have little.

3.3 Pluralism

In this section we consider whether our comparative evaluation of interviews supports our preliminary hypothesis regarding the monism of mainstreamers and the pluralism of heterodoxers in teaching economics. First, we must clarify how we treat pluralism. As Dow (2020) notes, it is multi-faceted. It can operate at a number of levels, including ontology, methodology, method, theory, and pedagogy, and it is the recognition and advocacy of variety at any of them. It is associated with critical open-mindedness, although a stronger version envisions interaction of perspectives (Dobusch and Kapeller 2012) and even integration (Steppacher and Gerber 2011). This advocacy can have myriad motivations, *inter alia* complexity of the world (Fullbrook 2009), strategic value (Garnett 2006), and an open system ontology (Lawson, 2009).

However, it is important to note that this section considers pluralism in teaching, which may not match pluralism in economics: it is possible to be pluralist in teaching whilst having firm intellectual commitments to one brand of economics. Heterodox economists may reject mainstream economics as a corpus of knowledge, yet for educational reasons, agree that it ought to be taught. The corollary is true for mainstream economists' attitude to teaching heterodoxy: they *could*, despite rejecting heterodox theory, decide to teach it on educational grounds. Typically, they do not (Mearman, et al. 2018a, 2018b). The key point is that pluralism in teaching entails some position regarding teaching, which itself may reflect (explicit or implicit) educational goals. Thus, the discussion which follows often links pluralism in teaching to educational objectives.

The interviews with mainstream economists do support the view that one way to avoid mere transmission and rote learning is to expose students to different perspectives; however, authors offer mixed messages on this point. On the one hand, Easterly rejects the transmission model and wants students to debate: 'I definitely do not like the model where they're just sitting there passively waiting for the truth and I just sort of stand there and say, 'This is what the truth is' ... I want to let them be aware of why there are two different positions on a debate and give them the tools with which they can decide which side of the debate they're going to come down on' (p. 361) Simultaneously, he makes several criticisms of Sachs who 'has chosen a position that is outside mainstream academic economics'. Frank

also suggests ambiguity, stressing that whilst '[w]e don't want to propagandise our students, ... when the logic and teachings of the profession *dictate* a certain way of looking at a problem, we shouldn't be shy about pointing that out' (pp. 16-17, emphasis added).

Hamermesh and Gordon are more explicit about what they consider to be limits to pluralism. For the former, his 'definition of economics' is that students 'think logically about how prices affect behaviour'. He proclaims further that, '[o]ver the years, I've met a lot of so-called economists who seemed to be a fraud by that criterion' (p. 207). Moreover: 'If you don't believe in prices affecting behaviour, get out of this business – go do sociology' (p. 208). Meanwhile, Gordon asserts that '...macroeconomic questions have answers' (p. 69), suggesting a clearer notion of truth; and that he does not 'see controversies as being particularly important in introductory economics', and that 'across the spectrum of the major introductory books, ideology hardly comes in at all' (p. 66). Here Gordon merely repeats the well-trodden trope of the value neutrality of economics, which has been debunked thoroughly by Walsh (2003). All of these contributions suggest that the full potential of pluralism is not actualised, despite its potential educational benefits. To us, they represent further examples of instrumental education.

Overall, within mainstream interviews little genuine pluralism is evident, beyond its most limited form. These conclusions are in line with those in section 2. In agreement with Mirowski (2013) we call this 'faux disputes' within monist limits, which do not question the foundations of mainstream economics but rather contest and replace auxiliary hypotheses, principles, concepts, and theories from the protective belt of the paradigm. Mainstream economics does appear monist, in only allowing debate within narrow limits, and in being extremely willing to deploy, without restraint, its theoretical constructs in the real world.

3.3.1 Why do our interviewees adopt pluralism?

We found some agreement about why pluralism in teaching matters. First, several respondents agreed that knowledge is context-dependent, so that it was unlikely one set of ideas would be correct, thereby allowing a diversity of ideas depending on context. Second, many shared considerable misgivings about mainstream economics, making alternatives particularly desirable. Third, pluralism was seen as a vehicle to arrive at better science, an integration of knowledge, or a theoretical synthesis. Fourth, it was seen as way to achieve specific pedagogical goals and facilitate societal change.

Fifth, several interviewees agreed that pluralism is about understanding that power influences the construction of economic knowledge. Specifically, they recognised the power dynamics within the economics discipline, which act against pluralism in economics. Hence, with one exception (Sent) we found a sentiment of pluralism meaning opposition to a monist mainstream. Indeed, more than any specific theoretical or methodological critique, it was these sociological concerns which gained most unanimity among our interviewees. Starkly, Charusheela states, 'I know that many heterodox economists, people who were my teachers and friends, paid a very severe price in their careers. Heterodox economics was something that was penalised, people were not hired, people were not published' (p. 73).

Monism in teaching is reinforced in various ways that relate to the sociology of the economics profession. One is through the limited training economics graduates receive, which emphasises mastery of technique and a narrow set of theoretical concepts, and a neglect of the history of thought. Also, hiring structures are driven by metrics, such as publishing in so-called top journals, the standards for which meet mainstream criteria of quality (Lee, et al., 2010). Similar criteria apply to promotion. This results in a mainstreaming of economics, including a monist and instrumental pedagogy. Another possibility is that a heterodox person might teach mainstream uncritically due to institutional pressures. Pluralist pedagogy is thus largely a matter of a personal decision and aspirations within given power structures. These processes have operated for some time within *inter alia* the USA (Lee 2004; Champlin and Knoedler 2017), the UK (Lee, et al. 2013), Australia (Thornton 2012), France (Chavance and Labrousse 2018), Italy (Corsi, et al. 2018) and Germany (Grimm, et al. 2018; Heise and Theime, 2016); but they are also affecting previously more pluralist countries such as Brazil (Guizzo, et al. 2019).

Thus, practising pluralist pedagogy is necessary to protect and increase the diversity of ideas within economics. Part of the argument for pluralist teaching is that the current mainstream has eschewed it; however, our interviewees acknowledged that this was not necessarily intentional but rather the outcome of the social structure of the profession. Again, our respondents criticised the narrowed focused training of Economics graduates, which leaves them ill-equipped to teach pluralistically, should they want to. This training is geared towards mathematical and statistical modelling with insufficient attention being paid to the nature of reality and in which ‘methodological matters are unexamined’ (Chick, p. 241). That comment echoes well-established heterodox criticisms of mainstream economics as being focused inappropriately on mathematical modelling (Lawson, *passim*).

The mode and *style* of argumentation also matters. For Dow, ‘it took me a long time to discover that people, particularly from a mainstream perspective, took argument as an expression of hostility’ (p. 24). Rigorous training in teaching might counteract these tendencies, but as outlined above, this typically has not happened; or where it does, it tends to be focused on effective transmission, often via engagement. In economics education, these strands manifest in various ways. Mainstream teaching encourages students to think:- ‘All you’ve got to do is to go out and apply the model, you’ve got to find your dataset and apply the model because the model has been done for you, right?’ (Charusheela, p. 74).

Another part of the argument relates pluralism back to the pedagogical goals of section 3.2: ‘The confrontation with these illusions and the critique of conventional theories often produced some crisis in students’ (Steppacher, p. 107) which was only resolved by looking at alternatives. But the sociology of the profession is such that it ‘blocked creative alternatives’ (p. 108) such as those offered by various heterodox theories. A further barrier to these is that if students are taught only mainstream theories, they can find the long struggle to escape them hard. As Shaikh puts it:

‘My first objective is to disrupt people’s thinking because I know as an economist no matter where they come from they have a bunch of received ideas dominated by neoclassical economics or monopoly school economics and I need to break those down.

I try to persuade them that it's not a question of adding on to those ideas but really starting differently' (p. 229).

3.3.2 How does pluralism manifest itself?

How pluralism manifests itself in teaching economics varies across our interviews. One interviewee interpreted pluralism as teaching the variety with the already pluralist mainstream (Sent). Some interpreted pluralism as tolerance of difference across all forms of economics. This could either mean valuing the utility of fruitful conversation with other economists including the mainstream, or an interested pluralism within heterodoxy excluding the mainstream.

Therefore, our interviewees supported strongly the teaching of at least one non-neoclassical economic perspective. Typically, this alternative was Marxism or Post-Keynesianism. Sometimes, it was Feminist, Evolutionary, Ecological or Institutional economics. Often but not always it was proposed in addition to mainstream thought. This can be summed up as '...to the extent we teach the theories, we teach them as *a* way, not *the* way' (Nelson, p. 123), which expresses a commitment to pluralism and a rebuke to monism. Similarly, for Nelson, 'I think it makes a big difference whether you treat something as "this is the way the world works" versus "this is the way some people have thought about explaining how the world works"' (p. 121). Moreover, '[t]he point of teaching, I think, is to get people to recognise that there are lots of different ways to come at a question' (Mongiovi, p. 200).

How pluralism is manifest differs with regard to the pedagogical goals discussed in 3.2 including the pursuit of social change. Some interviewees are keen to confront students with different views to force them to criticise, compare, contrast and reach some sort of judgement about the views: Darity lays 'out what the competing perspectives are and discussing what the evidence is in support of each of those perspectives, and then trying to engage the students in a conversation about which body of evidence is most persuasive' (p. 64; see also Dequech). Moreover, the reasons for doing this are articulated by several interviewees, as summed up by Carvalho, for whom teaching 'is not that or persuading that this or that school of thought has all the relevant answers but that of capacitating the student to decide by him/herself which approach seems the more promising' (p. 46). These approaches appear to reflect liberal educational concerns with criticality and autonomy. Furthermore, pluralism can improve the quality of conversation: 'I think there's a tremendous potential there to get students to understand why it is that people differ in their theories, so that you don't have the kind of bickering that I've witnessed in Berkeley when nobody actually sits down and says, "Why do you say that?"' (Chick, p. 241).

We found also some recognition that confronting students with irreconcilable debates may be debilitating, both for the students and for the teacher: 'I'm tortured because I'm teaching the textbook stuff and I'm trying to decide how much doubt students can handle about what's in their textbook and because I don't know whether I'm just confusing them or irritating them' (Mongiovi, p. 200). As such '[p]luralism can however be limited, confined to relativity with regard to mere opinions or illusions contradicted by certain fundamental truths such as that the material economic process is entropic and not mechanistic' (Steppacher, p. 108). In doing so, both suggest some awareness of how students learn, and of the challenges associated

with pluralist curriculum design, such as doubt creation and confusion. In other words, doubt and confusion are seen critically and not as goals. Indeed, Steppacher proposes the integration of knowledge based on common denominator concepts for a heterodox paradigm (*ibid.*). Consequently, heterodox pedagogy differs from what Mirowski (2013) has identified as neoliberalism's epistemological challenge of doubt creation (agnotology).

Conclusions

This paper has explored heterodox ideas on economics teaching, via a set of new semi-structured interviews with leading heterodox thinkers, contrasted with existing interviews with leading mainstreamers. We draw three sets of conclusions: how differently heterodox economists think about teaching; implications for teaching economics; and implications for heterodox economists specifically.

As expected, our respondents shared features with mainstream economists. They shared the goals of being clear, passionate and serious about teaching, to facilitate student learning. They saw teaching as a potential source of various sorts of change. Also, our interviewees cited the effect of their background on their development. For some, as in mainstream interviews, the profound effect of a teacher of theirs was evident (section 3.1). Mostly, for heterodox economists this effect was positive, for example of learning the importance of engagement, and for some, open-mindedness. Nonetheless, the difference between mainstream and heterodox teachers becomes clear on what heterodox economists perceive as bad practice, principally in the form of monism. Thus, teachers and undergraduate economics teaching can have counter-intuitive effects, such as providing the motivation for dissent. Indeed, for some of our interviewees, a key spur for their becoming heterodox seems to be a rejection of the canonical economics they received in their own training via standardised mainstream textbooks.

To the extent that heterodox economists view themselves as critics of the mainstream, one might expect to see it give explicit attention to educational philosophy and theories of learning; adopt liberal or critical educational goals (section 3.2); and value pluralism (section 3.3). To some extent these were found.

As in mainstream interviews, there was little explicit reference to a theory of the *learner*. Admittedly, this may be an artefact of our interview questions, rather than evidence that interviewees do not hold such a theory. In fact, we did find relatively greater references to the psychological dimension of (criticising) economic ideas, the importance of meaningful, experiential and participant knowledge, the terms *Bildung* and bounded rationality. These seems to suggest that heterodox economists do hold – albeit rather implicit - views of the human being that the learners are or ought to become that differ from the mainstream. The relatively greater emphasis on teaching economics through debate, meaning, and a critical approach to reality seem to suggest – again implicit - views about Truth that differ from the mainstream. Also, the personal reaction to and engagement with the *experience* of teaching and learning economics seems to differ from the mainstream because it demarcates a self-selection process into heterodox economics. This phenomenon warrants further investigation (on this point see Lawson, 2009) beyond those already undertaken (Berger 2016). In

conclusion, our comparative inquiry into heterodox pedagogy raises questions regarding heterodox economics in general, principally its notions of Truth, reality and human being.

Further, our interviewees were not *explicitly* aware of educational philosophy; however, in their statements about wanting students to be critical, autonomous thinkers, our respondents exhibited elements of a liberal approach to teaching. Does this separate them from the mainstream? Garnett (2016) claims both mainstream and heterodox economists aim at liberal education, and as examined in section 2, some mainstream authors have attempted to move economics towards liberal education. However, as discussed, the goal of 'thinking like an economist' tends to leave untouched the bases of mainstream thinking, suggesting that mainstream pedagogy will necessarily frustrate the achievement of liberal goals.

It is here we see the biggest difference between our interviewees and their mainstream counterparts: a commitment to pluralism *within* economics either at the class or curriculum level. Engaging pluralistically facilitates liberal goals because it demands that students think critically about the bases of mainstream (*and* heterodox) economic thinking. Crucially, for our interviewees, pluralism in teaching must include non-mainstream economics; but also, they did not seek to replace one monism with another, heterodox variant. In contrast, Colander and McGoldrick (2009) merely suggest exposing economics students to other elements of a general education – or via transdisciplinary pluralism (Colander, 2014), which allows mainstream economics to remain unchallenged.

What are the implications of these similarities and differences for economics teaching?

- 1) *Heterodox economics pedagogy is better suited to address challenges and respond to demands for change in economics:* the post-financial meltdown, global warming and COVID-19 economy are complex, multi-dimensional and uncertain by nature, requiring a plurality of perspectives and critical approaches to reality.
- 2) *Heterodox economics pedagogy is a better fit for the new teachers training environment in higher education:* due to its greater awareness of its own normativity and openness to the social, ecological and political dimensions of the economic process. Promisingly, now, the importance of teaching is being recognised, for instance by structures such as the teaching excellence framework in the UK, and by the reform of promotion routes to reward teaching. Teaching training is becoming a formal requirement for higher education lecturers. Thus, economists are now more likely to have been trained in educational and learning theory, also offering some potential change of how teaching is perceived among economists. However, unless mainstream economics becomes more genuinely pluralist, educational philosophy and the goals of liberal education may remain neglected. This impression is reinforced by analysis of the new UK teaching governance framework (Mearman, et al. 2018a) and the CORE Project (Mearman, et al. 2018b), neither of which express a coherent teaching philosophy. In the introduction, we referred to a vision of the socially, ecologically, and ethically conscientious economist. It seems unlikely that such a vision could be realised within mainstream economics as currently practised, not least because of a reluctance among its proponents to question its normative (utilitarian) foundations, or even acknowledge their existence, let alone admit others such as virtue ethics or deontology (Wight, 2009).

3) *Heterodox economics pedagogy can thrive in an unusually hierarchical discipline* (Fourcade, et al. 2015). Our interviews underline the importance of past teachers in influencing current economics educators. Hierarchies are reproduced by specific relationships, such as ‘who taught whom’. In this respect we can interpret the injunctions of Hamermesh and Gordon (section 3.3) as acting as ‘gatekeepers’ or control mechanisms, delineating ‘good’ economics by decree. This makes it hard for heterodox teaching to take root. Yet, our interviews show that heterodox economists have survived and even been successful in this rather hostile social structure by seizing opportunities to build communities and programmes that foster the next generation of scholars. This has been achieved by teaching of economics through constructive critique and alternatives to the mainstream, and by engaging with those willing to listen, be these other economists, university administrators, students, or the public. Some economics journals have also been open to such discussion (see Denis, 2009). Nonetheless, heterodox economists ought to work further to establish templates for their approach to teaching economics, which can be passed down and around heterodox networks. This points to the importance of increasing the number of heterodox teaching materials⁴ whilst expanding the groups of scholars⁵ (both real and virtual) who are open to or promoting heterodoxy as two crucial agendas for the strengthening of heterodoxy.

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⁴ These might include heterodox books and textbooks, such as Lavoie (2014), Rochon and Rossi (2016), Lee (2017), Reardon et al. (2017), Rethinking Economics’ Fischer et al. (2017), Harvey (2015), or online resources such as those curated within TRUE (Teaching Resources for Undergraduate Economics) under the aegis of the Economics Network, available at <https://www.economicsnetwork.ac.uk/heterodox> [Accessed 30 January 2020, 19:27].

⁵ For example: the World Economic Association (WEA), the heterodox economics newsletter (HEN), Rethinking and Reteaching Economics.

References

- Allgood, S., Walstad, W.B. and Siegfried, J.J., 2015. Research on teaching economics to undergraduates. *Journal of Economic Literature*, 53(2), pp.285-325.
- Bakhurst, D. 2011. *The Formation of Reason*. Wiley-Blackwell.
- Barone, C.A., 1991. Contending perspectives: curricular reform in economics. *The Journal of Economic Education*, 22(1), pp.15-26.
- Barone, C., 2011. Contending economic perspectives at a liberal arts college: a 25-year retrospective. *International Journal of Pluralism and Economics Education*, 2(1), pp.19-38.
- Bateman, B. 2009. The role of incentives (and culture) in rebalancing the economics major. In: Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Berger, S. 2016. Social costs and the psychology of neoclassical economists. In: Gräbner, C., Heinrich, T. and Schwardt, H., (Eds.) *Policy Implications of Recent Advances in Evolutionary and Institutional Economics*. London and New York: Routledge.
- Berger, S. 2019. Book Review of *Mikroökonomische Lehrbücher: Wissenschaft oder Ideologie?*, by Helge Peukert. *Int. J. Pluralism and Economics Education*, 10, (3): 303-310.
- Bloom, B.S., Mesia, B.B. and Krathwohl, D.R., 1964. Taxonomy of educational objectives (two vols: The affective domain & The cognitive domain). New York. David McKay, 9, pp.122-136.
- Bowles, S. and Carlin, W., 2020. What Students Learn in Economics 101: Time for a Change. *Journal of Economic Literature*.
- Bowmaker, S.W., 2010. The Heart of Teaching Economics. *Books*.
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), pp.77-101.
- Bridges, D., 1992. Enterprise and liberal education. *Journal of Philosophy of Education*, 26(1), pp.91-98.
- Bridges, A. and Hartmann, H., 1975. Pedagogy by the Oppressed. *Review of Radical Political Economics*, 6(4), pp.75-79.
- Cedrini, M. and Fontana, M., 2017. Just another niche in the wall? How specialization is changing the face of mainstream economics. *Cambridge Journal of Economics*, 42(2), pp.427-451.
- Champlin, D. & Knoedler, J. 2017. Contingent Labor and Higher Education, *Review of Political Economy*, 29:2, 232-248.
- Chavance, B. & Labrousse, A. 2018. Institutions and 'Science': The Contest about Pluralism in Economics in France, *Review of Political Economy*, 30:2, 190-209
- Clarke, P. and Mearman, A., 2001. Heterodoxy, educational aims and economics. *Journal of Economic and Social Policy*, 5(2), pp.43-57.
- Clarke, P. and Mearman, A., 2003. Why Marxist economics should be taught but probably won't be!. *Capital & Class*, 27(1), pp.55-80.
- Colander, D., 2000. The death of neoclassical economics. *Journal of the history of Economic Thought*, 22(2), pp.127-143.
- Colander, D., 2014. The wrong type of pluralism: toward a transdisciplinary social science. *Review of Political Economy*, 26(4), pp.516-525.
- Colander, D., Holt, R. and Rosser Jr, B., 2004. The changing face of mainstream economics. *Review of Political Economy*, 16(4), pp.485-499.

- Colander, D. and McGoldrick, K. 2010. The Teagle Foundation report: the economics major as part of a liberal education. In: Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Corsi, M; D'Ippoliti, C. & Zacchia, G. 2018. A Case Study of Pluralism in Economics: The Heterodox Glass Ceiling in Italy, *Review of Political Economy*, 30 (2): 172-189.
- Decker, S., Elsner, W. and Flechtner, S. eds., 2018. *Advancing Pluralism in Teaching Economics: International Perspectives on a Textbook Science*. Routledge.
- Dequech, D., 2007. Neoclassical, mainstream, orthodox, and heterodox economics. *Journal of Post Keynesian Economics*, 30(2): pp.279-302.
- Dobusch, L. and Kapeller, J., 2012. Heterodox United vs. Mainstream City? Sketching a framework for interested pluralism in economics. *Journal of Economic Issues*, 46(4), pp.1035-1058.
- Dow, S.C., 2000. Prospects for the progress of heterodox economics. *Journal of the History of Economic Thought*, 22(2), pp.157-170.
- Dow, S., 2009. History of thought and methodology in pluralist economics education. *International Review of Economics Education*, 8(2), pp.41-57.
- Dow, S. 2020. Pluralism and Heterodox Economics, in A. Hermann and S. Mouatt (eds), *Contemporary Issues of Heterodox Economics: Implications for Theory and Policy Action*, London: Routledge.
- Downward, P. and Mearman, A., 2007. Retrodution as mixed-methods triangulation in economic research: reorienting economics into social science. *Cambridge Journal of Economics*, 31(1), pp.77-99.
- Earl, P.E., 2000. Indeterminacy in the economics classroom. *economics as an Art of Thought: Essays in Memory of GLS Shackle*, 36, p.25.
- Earle, J., Moran, C. and Ward-Perkins, Z., 2016. Econocracy. In *The Econocracy*. Manchester University Press.
- Fischer, L., Hasell, J., Proctor, J.C., Uwakwe, D., Perkins, Z.W. and Watson, C. eds., 2017. *Rethinking economics: An introduction to pluralist economics*. Routledge.
- Fourcade, M., Ollion, E. and Algan, Y., 2015. The superiority of economists. *Journal of economic perspectives*, 29(1), pp.89-114.
- Fullbrook, E. (ed.) 2009. *Ontology and Economics: Tony Lawson and his critics*. London and New York: Routledge.
- Freeman, A., 2009. The economists of tomorrow: the case for a pluralist subject benchmark statement for economics. *International Review of Economics Education*, 8(2), pp.23-40.
- Freire, P., 1970. *Pedagogy of the oppressed* (MB Ramos, Trans.). New York: Continuum, 2007.
- Garnett, R.F., 2006. Paradigms and pluralism in heterodox economics. *Review of Political Economy*, 18(4), pp.521-546.
- Garnett, R.F., 2009. Thinking for yourself, like an economist. In Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Garnett Jr, R.F., 2016. Ethics and learning in undergraduate economics education. In G. deMartino and D. McCloskey (eds.) *The Oxford handbook of professional economic ethics*.
- Garnett, R.F., Olsen, E.K. and Starr, M., 2009. Economic pluralism for the twenty-first century. In *Economic Pluralism* (pp. 23-38). Routledge.

- Grimm, C., Puehringer, S. and Kapeller, J. 2018. 'Paradigms and politics: the state of economics in the German-speaking countries', ICAE Working Paper Series, 77.
- Guizzo, D., Mearman, A. and Berger, S., 2019. 'TAMA' economics under siege in Brazil: the threats of curriculum governance reform. *Review of International Political Economy*, pp.1-24.
- Hansen, W. L., 1986. What knowledge is worth knowing – for economics majors? *American Economic Review*, 72 (2), pp. 149-52.
- Hansen, W.L., 2009. Reinvigorating liberal education with an expected proficiencies approach to the academic major. In Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Harvey, J.T., 2015. *Contending perspectives in economics: A guide to contemporary schools of thought*. Edward Elgar Publishing.
- Heise, A. and Thieme, S. 2016. "The Short Rise and Long Fall of Heterodox Economics in Germany after the 1970s: Explorations in a Scientific Field of Power and Struggle. *Journal of Economic Issues*, 50 (4): 1105-1130.
- Helburn, S.W., 1997. ECON12 and the new social studies: Love's labor lost? *The Social Studies*, 88 (6), pp.268-276.
- Klamer, A. and Colander, D., 2019. *The making of an economist*. Routledge.
- Kvangraven, I.H. and C. Alves. 2019. Heterodox Economics as a Positive Project: Revisiting the Debate. *ESRC GPID Research Network*, Working Paper 19.
- Lapidus, J., 2011. But which theory is right? Economic pluralism, developmental epistemology and uncertainty. *International Journal of Pluralism and Economics Education*, 2(1), pp.82-95.
- Lavoie, M. 2014. *Post-Keynesian Economics: New Foundations*. Cheltenham: Edward Elgar.
- Lawson, T., 2006. The nature of heterodox economics. *Cambridge journal of economics*, 30(4), pp.483-505.
- Lawson, T. 2009. Introduction. In: Fullbrook, E. (ed.) *Ontology and Economics: Tony Lawson and His Critics*. London and New York: Routledge: 1-12.
- Lee, F. S. 2004. To Be a Heterodox Economist: The Contested Landscape of American Economics, 1960s and 1970s. *Journal of Economic Issues*, v. 38, n. 3, p. 747–763.
- Lee, F.S., Cronin, B.C., McConnell, S. and Dean, E., 2010. Research quality rankings of heterodox economic journals in a contested discipline. *American Journal of Economics and Sociology*, 69(5), pp.1409-1452.
- Lee, F.S., 2012. Heterodox economics and its critics. *Review of Political Economy*, 24(2), pp.337-351.
- Lee, FS., Pham, X. and Gu, G. 2013. 'The UK Research Assessment Exercise and the narrowing of UK economics', *Cambridge Journal of Economics*. 37 (4), pp.693-717.
- Lee, F.S. 2017. *Microeconomic Theory: A Heterodox Approach*. Edited by Tae-Hee Jo. London & New York: Routledge.
- Marglin, S. 2009. The economics major as illiberal education. In: Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Mariyani-Squire, E. and Moussa, M. (2014), Fallibilism, Liberalism and Stilwell's Advocacy for Pluralism in Economics, *The Journal of Australian Political Economy*, No 75, Winter, pp.194-210.

- Mearman, A., Guizzo, D. and Berger, S., 2018a. Whither political economy? Evaluating the CORE project as a response to calls for change in economics teaching. *Review of Political Economy*, 30(2), pp.241-259.
- Mearman, A., Guizzo, D. and Berger, S., 2018b. Is UK economics teaching changing? Evaluating the new subject benchmark statement. *Review of Social Economy*, 76(3), pp.377-396.
- Mearman, A., Berger, S. and Guizzo, D., 2019a. *What is Heterodox Economics?: Conversations with Leading Economists*. Routledge.
- Mearman, A., Berger, S. and Guizzo, D., 2019b. *What is heterodox economics: insight from new interview data*, mimeo.
- Mirowski, P. 2013. *Never Let a Serious Crisis Go to Waste*. London and New York: Verso.
- Morgan, J., 2015. Is economics responding to critique? What do the UK 2015 QAA subject benchmarks indicate?. *Review of Political Economy*, 27(4), pp.518-538.
- Morgan, J., Philp, B., Cronin, B., Bigo, V., Chick, V., Desai, R., Ekeland, A., Freeman, A., Hermann, A., Lee, F. and Mearman, A., 2014. Pluralism, Heterodoxy, and the Prospects for a new Economics Curriculum: Assessing the potential of INET, What's the Use of Economics, and the CORE project. *Association for Heterodox Economics*, http://www.hetecon.net/documents/The_prospects_for_a_new_economic_curriculum.pdf.
- Nelson, J.A., 2009. The principles course. *The handbook of pluralist economics education*, 9, p.57.
- Nelson, J.A., 2011. Broader questions and a bigger toolbox: A problem-centred and student-centred approach to teaching pluralist economics.
- Nesiba, R.F., 2012. What do undergraduates study in heterodox economics programs? An examination of the curricula structure at 36 self-identified programs. *On the Horizon*, 20(3), pp. 182-193.
- O'Donnell, R., 2009. 19 Economic pluralism and skill formation. *Economic pluralism*, 122, p.262.
- Post-Crash Economics Society - PCES (2015), 'Economics as a Pluralist, liberal education', *Royal Economics Society Newsletter*, n. 168, pp. 16-20.
- Peukert, H. 2018. *Mikroökonomische Lehrbücher: Wissenschaft oder Ideologie?* Metropolis-Verlag: Weimar bei Marburg.
- Perry, W., 1970. Forms of Intellectual and Ethical Development in the College Years. *A Scheme*. New York: Holt.
- Peterson, J. and McGoldrick, K., 2009. Pluralism and economic education: a learning theory approach. *International Review of Economics Education*, 8(2), pp.72-90.
- Reardon, J., Madi, M.A.C. and Cato, M.S. 2017. *Introducing a New Economics: Pluralist, Sustainable and Progressive*. London: Pluto.
- Rochon, L-P. and Rossi, S. 2016. *An Introduction to Macroeconomics: A Heterodox Approach to Economic Analysis*. Cheltenham: Edward Elgar.
- Salemi, M.K. and Siegfried, J.J., 1999. The state of economic education. *American Economic Review*, 89(2), pp.355-361.
- Shackelford, J., 1992. Feminist pedagogy: A means for bringing critical thinking and creativity to the economics classroom. *American Economic Review*, 82(2), pp.570-576.
- Siegfried, J.J., 2009. Really thinking like an economist. In: Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.

- Siegfried, J.J., Bartlett, R.L., Hansen, W.L., Kelley, A.C., McCloskey, D.N. and Tietenberg, T.H., 1991. The status and prospects of the economics major. *Journal of Economic Education*, 22(3), pp.197-224.
- Snowdon, B. and Vane, H.R., 1999. *Conversations with Leading Economists*. Edward Elgar Publishing.
- Steppacher, R. and Gerber, J-f. 2011. Towards an integrated heterodox economics paradigm. London: Palgrave Macmillan.
- Thoma, G.A., 1993. The Perry framework and tactics for teaching critical thinking in economics. *The Journal of Economic Education*, 24(2), pp.128-136.
- Thornton, T. 2012. 'The Economics Curriculum in Australian Universities, 1980 to 2011'. *Economic Papers*, vol. 31, n. 1, pp. 103-113.
- Walsh, V., 2003. Sen after Putnam. *Review of political economy*, 15(3), pp.315-394.
- Watts, M. 2009. Preface. In Colander, D.C. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Wight, J. 2009. Moral reasoning in economics. In: Colander, D. and McGoldrick, K. Eds., 2010. *Educating economists: The Teagle discussion on re-evaluating the undergraduate economics major*. Edward Elgar Publishing.
- Wrenn, M., 2007. What is heterodox economics? Conversations with historians of economic thought. *Forum for Social Economics*, 36 (2), pp. 97-108.

Appendix

- 1) *How did you become an economist?*
- 2) *Please tell us how you developed your particular individual contribution?*
- 3) *We have chosen to speak to you as we consider you a heterodox economist. Would you label yourself as a heterodox economist?*
- 4) *What do you think Heterodox Economics is?*
- 5) *What are the problems of mainstream economics?*
- 6) *What are you trying to achieve as an economist?*
- 7) *Do you seek to influence society, if so how?*
- 8) *What are your strategies for seeking research funding?*
- 9) *What do you enjoy most about teaching?*
- 10) *What do you seek to achieve in teaching? How do you put this into practice?*
- 11) *The notable economist McCloskey (1983) referred to economics as poetry. What do you think about that?*

LIST OF INTERVIEWEES

Interviewee name	Position	Location
Fernando Cardim de Carvalho	Professor, Federal University of Rio de Janeiro, and Levy Institute of Bard College	Brazil
S Charusheela	Professor, University of Washington, Bothell	USA
Victoria Chick	Professor Emerita, University College, London	UK
William Darity	Professor, Duke University	USA
David Dequech	Professor, University of Campinas	Brazil
Sheila Dow	Professor Emerita, University of Stirling	UK
Edward Fullbrook	Professor Emeritus, UWE Bristol	UK
Tony Lawson	Professor, Cambridge University	UK
Joan Martinez Alier	Professor, Universidad Autonomia Barcelona	Spain
Esther Mirjam-Sent	Professor, Radboud; and Kingdom of the Netherlands Senate Member	Netherlands
Gary Mongiovi	Professor, St John's University	USA
Julie Nelson	Professor, Massachusetts University, Boston	USA
Anwar Shaikh	Professor, New School University	USA
Ralf Steppacher	Professor, University Institute of Development Studies, Geneva	Switzerland
Karma Ura	Government, Kingdom of Bhutan	Bhutan
Ulrich Witt	Professor Emeritus, Max Planck Institute	Switzerland