

(SHREDECON EDITION)

INDETERMINACY IN THE ECONOMICS CLASSROOM

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And so to the University course in economics. The first task of the University teacher of any liberal art is surely to persuade his students that the most important things he will put before them are questions and not answers. He is going to put up for them a scaffolding, and leave them to build within it. He has to persuade them that they have not come to the University to learn as it were by heart things which are already hard-and-fast and cut-and-dried, but to watch and perhaps help in a process, the driving of a causeway which will be made gradually firmer by the traffic of many minds. (Shackle 1953: 18)

1. INTRODUCTION

The view of the role of the economics lecturer that George Shackle offered towards the end of his Inaugural Lecture at the University of Liverpool comes as no surprise to economists familiar with his work. His writings on the implications of uncertainty for economic analysis shatter hopes of constructing universal thought schemes and deterministic models. They point instead towards the creative use of our imaginations to construct rival scenarios and then debate their plausibility and implications (Jefferson 1983;

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Loasby 1990), and to the study of the stereotypes or drills that people use to cope with the ordinary business of living (Shackle 1963: 18). However, over fifty years after Shackle's inaugural lecture, few economists are offering the kinds of training that Shackle advocated. What most economics students receive is not a guide to contending perspectives (Barone 1991), which highlights disputed areas, but a thoroughly neoclassical training that focuses on determinate solutions.

This probably reflects factors such as faculty politics, perceived unavailability of suitable texts, claims that intellectual standards will inevitably be lowered if attempts are made to 'cram a quart into a pint pot', and a belief that undergraduates simply will not be able to cope with such an approach to teaching. Most academic economists do not try to find out whether all these barriers really exist and are insuperable; they simply take them for granted. This may reflect incentive structures that reward success in publishing in prestigious mainstream journals (see Earl 1983; Colander 1991) rather than time invested in innovative teaching methods. Some of the failure to teach non-mainstream modes of thought may reflect a blissful ignorance of the existence of alternatives but insofar as mainstream economists are knowingly failing to alert their classes to schools of thought that are not the 'economics equivalents of the "flat earth society"' (Weintraub 1985: 1118), then serious questions are raised about their academic integrity (see Parvin 1992).

This chapter focuses on how students may be expected to behave if actually presented with a non-deterministic approach to the teaching of economics: in other words, I will be exploring the practical feasibility of Shackle's vision of what might happen in the economics classroom. My interest in this issue was originally triggered by Jefferson's (1983: 146) reports of resistance to scenario planning within the Shell Petroleum Company: many of Shell's managers found it hard to accept the idea of a system of planning designed to highlight uncertainties, for their normal way of viewing planning was as an activity intended to reduce uncertainty. If senior managers experienced such difficulties, we might expect similar problems in the economics classroom due to tensions between a non-deterministic approach to teaching economics and the stereotypes used by students to assist their learning. I begin by showing that such fears are indeed well-grounded, but I then consider ways in which university teachers of economics might overcome these difficulties. To do this I call partly on my own sometimes traumatic experiences as well as on research associated with the work of Harvard educationalist William G. Perry, Jr (1970, 1981, 1985), whose vision of the role of a liberal arts education bears an uncanny resemblance to that expressed by Shackle in his inaugural lecture.

During this chapter, a willingness to make *commitments* to particular ideas will be taken as indicating a high level of intellectual and ethical

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development. Non-deterministic teaching encourages students to choose for themselves particular ways of sizing up economic problems in the light of (i) their new-found knowledge of commitments made by economists who have gone before them and (ii) criticisms offered by members of rival schools who have thought long and hard about what is going on in their opponents' camps. If students are offered this knowledge they are not merely being given an honest guide to the difficulties that economics presents, they are more likely to become conscious of the core notions that provide the basis for mainstream economics, not merely its rivals. For example, it may take a discussion of the idea of satisficing behaviour to clarify what is involved in constrained optimization, or an outline of 'normal cost' price theory to render transparent the market-clearing philosophy embodied in marginalist approaches to pricing (cf. Lee 1984).

Such an approach to teaching economics does not require that the lecturer maintains a detachment from any particular school of thought in economics. On the contrary, as we shall see, students may benefit from being taught by economists who are candid about the factors that have led them to make particular commitments. So long as lecturers are committed to the idea that it is desirable for students to be exposed to contending perspectives and try to present alternative points of view in ways which 'do unto rival viewpoints as they would like to see the latter's proponents do unto their own', multi-paradigm teaching is compatible with lecturers having made commitments to particular approaches to theorising about particular situations. In fact, an economist who feels particularly attracted to one school of thought may be a particularly exciting teacher of not only its strengths and weaknesses but also of those of its rivals: as Shackle (1967: 295–6) argued, 'Only a theory that one has come to terms with can be taught with zest and conviction; but this deep assessment of a theory implies a consciousness of its weaknesses and possible alternatives, as well as of efficiency and beauty.'

2. PERRY'S SCHEME OF COGNITIVE AND ETHICAL DEVELOPMENT

When students perform poorly their teachers often blame a lack of effort or ability. After interviewing many undergraduates at Harvard, William Perry offered a rather different perspective: the problem may be that the ways in which students are setting about trying to learn may be grossly out of line with the views of learning on which their teachers are building their courses. Perry identified a sequence of different ways of thinking through which students tended progress en route to the sorts of way of making sense of the world used by their teachers. Some might be well advanced along this road

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even by the time they matriculated; others might fail to go far along it even after three or four years of diligent study. It may be summarized as follows:

Level 1: Dualism

The least mature stage in Perry's scheme — and one that Perry (1981) only occasionally observed — is a world-view in which students see things in dualistic terms: everything is expected to be either black or white. Dualistic students see themselves rather as empty vessels waiting to be filled with the truth and having a duty to pay attention in lectures, taking down what their teachers say and afterwards memorizing it. They expect that, if they work hard, following up every reading instruction and learning the Right Answers, they will be duly rewarded at examination time for demonstrating to their teachers their diligence and grasp of the Truth. They see their teachers as experts who know what is correct and whose role therefore is to present the Truth to them in a way that makes it easy to grasp; this is seen to involve clearly structured lectures and assignments, with the teacher ensuring that the class is under control. Lecturers who are repeatedly interrupted by students asking questions and who cannot always deal with these questions are seen by dualistic students as poor teachers: if these lecturers knew their subjects properly and were able to present the material more clearly they would not be causing such confusion and allowing such interruptions to disrupt the process of transferring the truth from themselves to the students.

Dualistic students have a great deal of trouble seeing the point of class discussions, for they do not see their peers as knowing any more than themselves. They get very frustrated by abstract learning experiences that do not seem to have clear answers and if asked to work out answers for themselves they aim their efforts largely at finding out what the teachers expect. They believe that better grades follow automatically if they provide more information, for grading is simply a matter of counting up the amount of correct information that they have supplied.

Level 2: Dualism questioned

It is not surprising that extreme Type 1 dualism is rather rarely observed. Sooner or later, students are likely to encounter lecturers who point out differences in opinions in particular areas, who seem to wish to challenge things that are in textbooks, and who seem happy to leave their classes with unresolved problems rather than sets of answers. Students at the second stage are alert to this phenomenon but seek to resolve its apparent contradiction with their dualistic style of thinking by inferring that some Authorities must be right and others wrong. If those that they judge not to be frauds are nonetheless giving them problems rather than answers, they are prone to infer that the Good Authorities expect them to be able to learn

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from these problems what the right answers are. This cognitive strategy becomes rather difficult to sustain once some of the Good Authorities admit that they do not yet know all the answers and reward highly students whose answers to identical questions differ greatly: if these lecturers are now not to be thought of as frauds, then a non-dualistic way of looking at things is needed to make sense of their behaviour.

Level 3: Multiplicity, but only for the moment?

The initial way of seeing differences in opinion as legitimate rather than as a sign of differences in competence or honesty of teachers is to see them as states of affairs that will eventually be resolved by the experts working out what the Truth is. (When Shackle wrote the words at the end of this chapter's epigraph — referring to 'the driving of a causeway which will be made gradually firmer by the traffic of many minds' — he might be said to have been taking this perspective himself, though with a long-term time horizon.) Though this may at first restore the students' faiths in their teachers, they then start realizing just how many areas are presently disputed, how long some disputes have been raging and how far many disputes seem from resolution. This leads to a puzzle: if supposed experts can keep on arguing amongst themselves and cannot tell their students what the truth is, then why should they be seen as experts in their fields? It now becomes rather difficult to study merely by memorizing facts. Not merely is it unclear what the facts are, students also become worried that they could do poorly if they do not understand how their teachers think. Grading can no longer be seen merely as counting correct pieces of information. The Type 3 student begins to wonder whether teachers can be trusted to be fair if the latter hold strong opinions on issues about which they set questions.

Level 4: Anything goes?

Once students can no longer judge their teachers as expert authorities on the basis that they know the Truth, they tend to start thinking that there is *no* basis for saying who is an authority, and that their own views might be at least as good as those of their teachers. They grow more confident about challenging what their teachers say and see greater value in class discussions in which they can share with their peers their ideas on how particular issues might be seen. But they also start to see that although everyone may have a right to his or her own opinions, this does not imply that no one can be wrong, for some opinions may be ones whose proponents seem unable to support with facts and reasons. They start seeing that in some courses teachers are rewarding them not for coming up with the Right Answer but on the basis of whether they are able to think about things in particular ways — whether they have mastered particular concepts, rather than whether they

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have memorized particular facts — and can justify the conclusions that they reach.

Level 5: Relativism

The next discovery is that this style of thinking pays off in other areas of learning and life. Students begin to see that in interacting with other people it helps to try to understand how they are thinking — where they are coming from and what is important to them. They see that their teachers try to do this, too, but that the latter do not treat every point of view as equally valid: what is acceptable depends on the context and the evidence that is available. They begin to realize that their teachers can serve as models of how people can make sense of uncertainties about their beliefs and can help them think critically about their own experiences and ways of making judgments, and the views of others. A teacher comes to be seen as a valuable resource who can provide positive and negative feedback on students' thinking. Negative evaluations come to be seen as opportunities for reframing things rather than as a bad person making judgments about one's personal worth.

Level 6 and beyond: Tentative commitments to personal viewpoints

The discovery that knowledge is relative and that teachers can be useful aides for becoming able to see strengths and weaknesses of particular ways of thinking does not solve the problem of what the individual student should believe. Individuals at the most advanced levels in Perry's analysis achieve their individuality by opting not simply to copy others but by making commitments following much soul searching — commitments with a capital 'C', exactly of the kind that Shackle (1967) had in mind in the passage quoted at the end of the introduction to this chapter. If people have made mental commitments, they will be prepared to fight wholeheartedly for their values and yet, if operating at Perry's highest levels, they will remain open to change. They will recognize that to make a single commitment still leaves them with a need to take decisions from time to time about whether existing commitments should be revised, abandoned or augmented with new ones.

3. CONSEQUENCES OF MISMATCHES BETWEEN STUDENTS' AND LECTURERS' EXPECTATIONS

The minority of lecturers who have tried to teach in a way which emphasizes differences in economists' perspectives and the open-ended nature of many economic puzzles can probably remember being surprised by students who seemed so innocent as to believe that textbooks contained the Truth. I have

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vivid memories of my first encounter with this phenomenon: an overseas student who shared his astonishment with me at the end of a tutorial in which, mindful of Andrews and Brunner (1975: 32), I had criticized the idea that a firm will stay in production so long as it covers at least its average variable costs. The student found it easy to see that this might not be so if the price failed to cover average fixed costs that could be avoided by closing down (for example, rates, rental payments and outlays on overhead staff), and yet he was perplexed that this was not what was said in the textbook.

Though academics may remember such incidents they probably forget that once they were just as naive in their expectations about the process of learning and the nature of economics. At best they probably remember the process of becoming committed to the kind of economics that they now practice. They will not be trying, as a matter of routine, to look at their courses from the standpoints that their students might be employing.

This is potentially most unfortunate. The work of Perry and his associates leads one to anticipate major problems if a course is presented to a class on the basis that all members are at the same level of development when in fact they are not. As Perry (1985: 16) points out, to teach a class consisting mainly of Level 5 students as if they are still Level 2 learners is probably going to result in boredom and frustration, but at least the Level 5 students will be able to make sense of what their teacher is doing. Things are very different in the reverse case.

Consider an intermediate microeconomics course which is presented as if the class consists of students that are at level 5 and, on this basis, includes instruction in a range of ways of thinking about topics such as consumer and producer theory, economic organization and choice under uncertainty. Some, perhaps the majority of the class, may actually be Level 2 students. During the course, their obsessive search for the Right Answers will be a barrier to concentrating on how different perspectives on the problem have been constructed, and on the difficulties in choosing between them that allow their continued coexistence. Such students will be most uncomfortable if faced with an examination question such as 'Discuss the extent to which Shackle's "potential surprise" theory of choice under uncertainty represents an advance on the "expected utility" analysis of how people decide which risks to take.' They will have trouble relating to the question if their teacher has not presented the material in a way which aims to demonstrate that Shackle's model completely dominates over the expected utility theory, or vice versa, and they will probably feel that their time has been wasted if they have been shown a model which, after all, turned out to be 'no good'. They are likely to see this sort of question as involving 'trick' wording. To avoid being caught out, they will look around for alternative questions set out in a more transparent manner. If they *do* attempt the question, they will probably

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construe it as a strangely worded invitation to present expositions of the two theories, or, if they have been taught in a style that praises Shackle's model, they may simply give an exposition of potential surprise analysis. The Level 2 students will expect that their grades will reflect their abilities to avoid technical errors as they present the theories. They will often miss cues provided by their examiner in wording the question, relating to particular philosophical differences (note, in this example, the use of the words 'uncertainty' and 'risk'). Worse still, they will not see that the question can be answered without any systematic outlining of either theory: an effective answer can readily be constructed around various criteria that might be relevant in judging the quality of a theory, such as predictive capabilities, assumptive realism, range of compass, logical consistency, and so on.

When Level 2 students are presented with questions that invite them to 'compare and contrast' particular pairs of theories or problem situations they are again likely to try to look elsewhere for more clear-cut questions; if they cannot do so, then they will tend to answer in terms of paired expositions of the two theories or pairs of lists of features, rather than in an integrative manner that displays critical thinking (Level 3 students may often produce similar types of answers, but will feel rather more at ease with such questions). Level 2 students will feel comfortable with questions that enable them to show that they have memorized successfully various definitions (for example, 'What is an indifference curve?') or set-piece applications of theory (for example, 'Use the indifference curve/budget line framework to show that a benefit in cash is better for poor people than a benefit in kind of equal cost to the government.');

they are much less able to cope well with applying tools in hitherto untried contexts.

Level 2 students are obviously going to run into trouble if their teachers set examinations that require them to display skills in synthesizing ideas, marshal evidence to back up particular conclusions and make personal judgments about which characteristics of a problem area are significant before they decide which theoretical tool might be useful for dealing with the problem. Their problem is not necessarily one involving limited ability to cope with particular technical issues or lines of thinking. If they tackle the questions in 'Level 2 style' they are likely to be penalized simply because they have not even *tried* to do the things that their teachers expected to see them do: their world-views stop them from answering the question.

Such students sometimes become aware, well before their final examinations, that there is a mismatch between their expectations of what will happen during the learning process and those of their teacher. Yet they may have great trouble facing up to the possibility that they should try to change the way they try to learn, rather than their teachers changing the way that they try to teach. For example, I well recall a distraught student who came to see me and said 'Look, I'm a commerce student, I like seeing things

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down as figures, in black and white; that's why I enjoy accountancy. I work hard and normally do well, but I'm really having trouble with your microeconomics course. I just don't know what I'm expected to be learning from you, it's all grey right now; I can't see where I am supposed to be going with all this fog.' This student was not yet aware that subjective elements could actually cloud issues in accountancy as well as in economics (cf. Buchanan and Thirlby (eds) 1973; Wolnizer 1987). He had no idea that the kind of economics training he was receiving might prepare him for coping with life as an accountant in a world where matters are not either black or white, and he made it clear that he merely was looking for a way of getting by in his microeconomics course whilst he kept applying his cherished Level 2 approach to learning elsewhere in his studies.

Such a reluctance to make a major change of outlook is entirely analogous with the resistance offered by neoclassical economists to suggestions that in some contexts they should embrace satisficing theory and abandon their core idea that *all* choices can be reduced to acts of constrained optimization. They will have applied the neoclassical hard core in many contexts but they will have little experience in using satisficing notions. Until they learn how to think in the alternative style they may risk making a bigger mess of things by trying to embrace it than by continuing to try to fit all decisions into the constrained optimization framework. We are grossly over-optimistic if we expect that Level 2 students and/or neoclassical economists will jump at the promise of greater insights that will follow if they invest in an alternative, more complicated way of viewing the world. Perry (1985: 16) even suggests they will need to go through something akin to a process of grieving: 'I believe that students will not be able to take a next step until they have come to terms with the losses that inhere in the step just taken'.

Three alternatives to progression to a higher learning level may be observed when a student finds it altogether too daunting to try thinking about the learning process in a new way recommended by a teacher or peers (see Perry 1981; Baxter Magolda and Porterfield 1988). Some students pursue a *temporizing* strategy, avoiding commitment whilst trying to gather mental strength to face up to the challenge of moving on in, say, the next academic year. Others *retreat* from looming complexity (for example, Level 4) to a simpler position (for example, Level 2 dualism). Yet others seek to *escape* from the task of choosing which ideas to embrace because they notice that any commitment to a way of thinking may seem to have inconvenient implications. Escape strategies involve either of two ways of achieving detachment from current challenges: one is dissociation, in other words, letting things drift so that fate determines the outcome; the other is encapsulation, whereby the student plunges into being busy in familiar ways.

Both escape strategies can manifest themselves at a variety of levels.

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Least alarming to a teacher may be instances of students avoiding commitment in their essays by making no attempt to argue their way towards a conclusion after putting down conflicting views on the topic in question. As an example of how bad dissociation can get on a grand scale, I will explain what happened when I tried teaching price theory in terms of a history of thinking about pricing and competition in from Alfred Marshall work in the 1890s to contestability theory in the 1980s. My intention had been to demonstrate to the class that economists can spend decade after decade stumbling from one puzzle to another, misunderstanding each other and going round in circles reinventing each other's ideas, with key questions remaining unresolved. I then expected to show the class how, despite the mess, they might begin to feel comfortable with most of the ideas, not simultaneously but in different applied contexts. With hindsight, my strategy amounted to an attempt to lead my class at high speed first on to Perry's Level 3 and then up to Level 5. However, since I was then still oblivious of Perry's work, I had not spent enough time explaining to them what they might experience.

Much to my dismay, lecture attendance soon dropped off dramatically. The students' representatives informed me that a large part of the class simply 'could not take all the different names contradicting one another' and had 'decided to spend their time concentrating on other courses where it was clearer what was wanted and where they were supposed to be going'. To win back the attention of the class took a major effort in terms of supplying handouts summarizing the individuals' key contributions and demonstrating that many of the prime sources that I had been discussing were actually footnoted in their texts (Marshall, Robinson, Chamberlin, Hall and Hitch, Sweezy, Baumol, and so on). The experience made very clear to me just how desperately my students wanted me to present a bland, finished product to them rather than show them potential building blocks and what use had been made of them; many students simply fled once I started showing them with chapter and verse how their textbook misrepresented or misinterpreted primary contributions. They were unwilling to derive self-confidence from being shown how even famous economists sometimes end up following questionable lines of logic or failing to see the point of what someone else has written.

It is possible to observe signs of thinking below the committed relativism level even among Masters students. If they have not been used to having their opinions and expertise respected by their teachers they appear prone to interpret, for example, an instruction to 'prepare a critical review of' as merely to mean 'prepare a summary of'. Indeed, they often write up their work under the latter heading even though the former is what is written in their course outline. It is not that they cannot be critical if they try but that they still expect the published word to be free of problems. When

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they read something that does not seem to make sense, they tend to fudge what they write about it on the basis that they are failing to understand it (which certainly *may* be true) rather than criticize it as not making sense for a particular set of reasons (which may well be the case, from particular standpoints).

4. PHASES OF DEVELOPMENT AMONG ACADEMIC ECONOMISTS, TOO?

A non-deterministic approach to teaching economics obviously has major potential to turn out disastrously if presented to an audience that consists largely of dualistic thinkers, for it highlights areas of difficulties rather than presenting the Truth and it invites students to make personal commitments when dealing with problems. I will shortly explore some ways of trying to help students move towards making commitments to relativism; I thereby hope to make it harder for entrenched interests to argue that such courses cannot work at the undergraduate level. But before I do this I think it may be useful to raise and relate to the process of economic discovery a further theme in Perry's work, namely, that in different parts of their lives people may operate at different levels of thought. If this is so, it is conceivable that academic economists may implicitly lament the fact that their students are answering questions in a Level 2 manner when the questions were set up in the hope that Level 5 or 6 answers would be offered and yet, in their own work as academics, they may in some areas actually be operating rather as if they are, say, Level 2 or Level 3 thinkers. This being so, an awareness of the Perry progression may enable them to advance intellectually.

One area in which we may expect to see the Perry progression at work is in different strategies that scholars use for coping with critical reactions of referees, for though they may have ceased being students, academics do not cease having to undergo examinations. Suppose the submission of a paper to a journal leads to a pair of opposing referee reports, one quite supportive and the other fairly critical. A relatively inexperienced academic may not be at the stage where the automatic reaction is to try to see how the critical referee may have come to see the paper as he/she did and then look for opportunities in the critical comments for improving the paper so that it will both satisfy the referee and extend its author's own line of thinking. Instead, the inexperienced academic may be prone to take strength from the positive report and dismiss the critical report as coming from someone who has not spent enough time seeing what the paper achieves. The trouble is, such behaviour is not going to be very helpful towards ensuring that the paper is revised in a way that will be acceptable to the presently hostile referee. What will probably be needed is a revision (and an accompanying letter) which

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shows the author's understanding of how the critical verdict was arrived at and argues the author's case (if it is possible to do so) in a manner which will make sense to the critic and, ultimately, to others who think in much the same way.

In outlining the Perry framework I tended to highlight problems that could arise if students were working at lower levels than their teachers: I did not consider what might happen if, say a Level 5 student sat an examination set by a Level 2 teacher. However, the latter kind of situation is one that may well arise when academic economists are having their work examined by their peers, whether in the process of screening contributions for possible publication or as part of critical discussions within works accepted for publication. (I suspect it is by no means unknown in the teaching context.) The contrasting works of Caldwell (1982, 1989) and Dow (1985, 1992) provide a very good example of this.

Caldwell ends his excellent examination of philosophical debates about methodology and the methodological practices of economists by making a commitment to methodological pluralism on the basis that 'the quest for a single, universal, prescriptive scientific methodology is quixotic' (1982: 244) and 'that results obtained within specific research programs which of necessity follow particular methodological precepts are program specific' (1982: 250–1). This sounds very much like Level 5–6 thinking. However, whilst Caldwell believes that it may be helpful if economists are conscious of the diversity of research programmes when they present their work, he stresses that he is only proposing methodological pluralism 'as a program for *methodologists*' (1982: 251, emphasis in original). Dow (1985) likewise argues that economists have much to learn from trying to understand the different methodological perspectives from which arguments are being constructed. But the way in which she encapsulates these differences is striking: she suggests that mainstream neoclassical economists have a dualistic view of the business of doing economics, whereas Post Keynesians embrace a diversity of methods each subordinate to their overall world-view. Dualistic thought is manifest in neoclassical work not merely in terms of tendencies to claim that economics that does not conform to the neoclassical way of doing things is 'not scientific' or is 'economic poetry, not real economics' (the latter dual is one that I have seen Frank Hahn use in respect of authors who write from subjectivist and behavioural standpoints); it is also evident in terms of a concern with, for example, a strict separation between endogeneity and exogeneity (Dow 1985: 119–21). By contrast, the Level 5-6 context-specific style of thinking in Post Keynesian writings is manifest via, for example, their emphasis on the importance of institutions and their attitudes to econometrics (Dow 1985: 75–7).

Caldwell (1989) finds it very difficult to come to terms with the Post Keynesian methodology. For example, he inquires how Eichner's attempts

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to build an empirically grounded approach to economics can be embraced by the same scholars who feel drawn to those of Shackle's writings that have raised major questions about the possibility of predicting an undetermined future. As Dow (1992) points out, Caldwell's critique of Post Keynesian thinking is based on duals such as *a priorism*/prediction and prediction/explanation that are not actually part of the context-dependent way in which Post Keynesians think. From the standpoint of Perry's framework, it appears while Caldwell argues in Level 5–6 terms that different areas of inquiry may need different types of methodologies, he uses something more akin to a Level 2 mode when he tries to argue that a particular way of thinking about *economic* issues should not involve the use of a range of related methodologies in a context-dependent way. If one of the most highly regarded economic methodologists of our time can fail to appreciate a key aspect of the Post Keynesian version of committed relativism, then what hope should we have that students will be able to cope with a multi-paradigm text such as Dow's (1985) *Macroeconomic Thought: A Methodological Approach*?

5. STRATEGIES FOR ASSISTING PROGRESSION TOWARDS COMMITTED RELATIVISM AND BEYOND

In a paper which both advocates a 'contending perspectives' approach to the teaching of economics and makes explicit reference to Perry, Barone (1991: 21–2) suggests that one of the payoffs to this kind of teaching is that students appear to move more rapidly from dualistic towards relativistic modes of thinking. This should not be seen as inconsistent with what I have so far been arguing, namely, that attempts to teach economics in a non-deterministic manner have the potential to result in major teaching disasters on account of mismatches between teachers' and students' expectations and learning strategies. The key thing is how one sets about presenting this kind of learning experience. Before I outline possible strategies, however, I think it is important to note that Barone is misrepresenting the teaching process when he reports (1991: 22) that, via the contending perspectives approach to economics, 'we have moved our students to a more advanced intellectual plane.' As Perry points out,

[W]e cannot push anyone to develop, or 'get them to see' or 'impact' them. The causal metaphors hidden in English verbs give us a distracting vocabulary for pedagogy. The tone is Lockean and provocative of resistance. We *can* provide, we *can* design opportunities. We can create settings in which students who are

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ready will be more likely to make new kinds of sense.(Perry 1985: 16, italics in original)

If students have not yet created for themselves views of what learning might involve that are similar to those of their teachers, they will not be able to see what their teachers are getting at when the latter try to explain to them what they hope to see them do in their courses.

I know this only too well from the frustrating experience of trying to teach business economics to both undergraduate and MBA classes. I frequently use case studies of actual firms as the basis for tutorials, assignments and examination questions, with the typical task being to make a critical appraisal, on the basis of economic theory from the course, of the strategy of a firm or of several firms whose strategies partly overlap but partly differ. (I normally warn them which companies will be the subjects of examination questions several weeks before the date of the examination.) Many students set out to answer such questions by searching for articles that have already been written on the firm(s) in question by academics or business journalists. Such students then *report* what these 'authorities' have found but make no attempt to *do analysis* of their own by choosing which of the components of their theoretical toolkit from the course might be well suited to the context in question. They also tend to fail to consider the pros and cons strategies the firm(s) could have selected instead of the one(s) actually chosen, unless this is done in existing work that they discover. In other words, they operate a Level 2, rather as if they are journalists, than operating at Level 5 and showing they could be left to work out solutions to themselves as business analysts (a particularly worrying situation in the case of the MBA students!). This happens despite me giving warnings about it being not what I want to see and urging them not to spend their time researching what others have written about the companies because I will only be giving marks for their own analysis. It also happens in assignments and exam answers despite me showing them in preceding tutorials what it is possible to do with similar questions using just the theoretical materials from the course and historical material from the firms' websites.

One lesson that we might take from the behaviour of such students is that practice is likely to be needed to ensure that potential for thinking at a higher level is realized. This begs the question of the scale of teaching resources that may be required. If teachers give frequent opportunities for experimentation with writing answers to questions that do not give prompts as to exactly how answers might be constructed, they are likely to spend much more of their time marking essays and being visited by students who demand advice on how to tackle to questions. To liberate time for providing feedback in the sort of detail that will assist students in improving future assignments — in other words, not merely grading the paper and adding a

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brief comment at the end, but painstakingly going through it rather as if refereeing an article and pointing out precisely where redundant material lies, where alternative viewpoints are being ignored, and where non sequiturs are present — it may be worth adopting the rule that absolutely no consultations are allowed about an assignment prior to the date at which it is handed back in marked form. This rule would need to be communicated with colleagues if it were not a department-/faculty-wide policy, for otherwise students from one course might simply increase their visits to other instructors.

The ‘no prior consultations’ rule would be likely to come as a shock to many students, particularly Level 2 thinkers, who expect to be ‘spoon-fed’ by their teachers. However, there might be major benefits from explaining to the class why the rule was felt necessary and the effects it might have — perceptions of the role of teachers and the nature of the learning may be changed by students if they are told that the rule is designed to give tutors more time to spend on giving feedback on students’ experimental attempts at using their own ways of thinking in particular contexts. It is a chance to try to convey the message that students’ own ways of looking at things are taken seriously and that students are expected to take responsibility for the ideas they commit to paper. The teacher can also emphasize that the rule is aimed at increasing fairness: it guards against rent-seeking behaviour by those students who think nothing of trying to get three or four consultations with an instructor even over a minor assignment. To ensure consistency with the emphasis on the experimental nature of written assignments, it would appear necessary to allow the falsification of expectations not to be catastrophic. One way of encouraging relatively safe experimentation is to inform students that while they might tackle all the suggested assignments, only their best, say, three papers would count towards their coursework grades. Having adopted precisely these strategies and explained their rationale to my class, I have been pleasantly surprised to see how the students have accepted them in the spirit that was intended, and they have started to take feedback on their essays very seriously indeed.

If economics teachers are trying to facilitate the recognition by their students of more advanced patterns of thinking, they can augment the provision of feedback on written work by providing in lectures, as handouts or as library resources, detailed information about how questions might be tackled in ways that would be seen as commendable and on the characteristics of answers that are awarded poor or mediocre marks. This can be done not only for assignments currently being used (after they have been marked and returned to the class) but also for previous examination questions, mock examination questions and assignments from previous years (for examples, see Earl 1995, and the companion website of Earl and Wakeley 2005). It would be inappropriate to call such collections of

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information ‘model answers’, given that the goal is to encourage students to think for themselves. Ideally, these learning resources could be provided to students as integral parts of their textbooks (as in Earl 1995), in contrast to the prevailing situation whereby they tend to be confined to instructors’ manuals designed to accompany particular texts. After all, if teachers are trying to get their students to see them as ‘people who have been this way before and can help us to achieve new understandings’ rather than as the ‘them’ who examine ‘us’, then it is clearly inappropriate for instructors’ manuals to exist offering kinds of resources that are not available to students.

Wherever possible, it seems advisable to try to relate the course materials to students’ existing repertoires of experiences for, as both Perry and Shackle often remind us, creative thinking involves a resorting of existing elements. Lecturers can do this not merely by keeping theoretical discussions related to problems of economic indeterminacy that students are likely to be experiencing in their lives and encouraging students to try to relate such experiences to the theoretical material. Teachers should also try to be alert to things that students say which reveal an ability to think at higher levels than they are presently thinking in economics. They should not be downhearted if they discover that their students are, say, Level 2 thinkers in economics but Level 5 thinkers when they argue amongst themselves about the merits of various sporting teams, consumer durables or artistic works, for the latter can be used as metaphors that might be applied to economics.

6. WHEN AND HOW TO BRING INDETERMINACY INTO THE ECONOMICS CLASSROOM

When designing a non-deterministic three-year university-level programme in economics it might be tempting to view the first-year course as the vehicle for getting students familiar with basic economic concepts and terms, the second-year course as one which opens students’ eyes to the range of competing world-views that exist in economics and areas of unresolved debate, and the third-year course as one that involves an emphasis on students thinking for themselves in a variety applied contexts. In terms of Perry’s progression, the temptation is to build the introductory course on the assumption that most students are Level 1 or Level 2 learners, the intermediate course in the hope that students switch over to Level 3 or Type 4 thinking styles, and the advanced course on the expectation that students will be ready to switch to the Level 5 or Level 6 styles of thinking. There are a number of reasons why this could prove an unfortunate strategy.

First, it downplays Perry’s message that different students in a typical

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classroom are likely to be at different stages in their intellectual development. If lecturers merely offer a thoroughly dualistic approach to teaching introductory economics, they will fail to captivate students in a first-year class who are already getting towards relativistic thinking as a result of experiences in other parts of their lives. The work of Perry and his associates suggests that courses may be better designed so that they present opportunities for a range of approaches to learning to seem rewarding. This not only helps to reduce the risk that students will become bored or retreat from involvement in the subject, it also gives opportunities for students to discover that different strategies for coping with learning may be required for coping with different kinds of problems. No one ends up feeling excluded.

Secondly, if introductions to economics are presented in a thoroughly cut-and-dried manner, students will not be finding problems with applying dualistic thinking to economics: they may be scoring highly and perceive no need to try to come up with other views of what is going on. A dualistic introduction to economics would involve no change from the present typical introductory course involving mainly formal lectures to huge classes and 'objective testing' via multiple-choice examinations. This seems economical in terms of its resource requirements but it has several disastrous consequences for those who try to introduce contending perspectives at the intermediate level. The conventional introductory style of teaching does nothing to falsify expectations that students bring from their high schools based on years of dualistic training. Even if university were expected to be different from school in some vaguely imagined way, then dualistic teaching is likely to signal to the first-year students that it is, in fact, little more than a continuation of school: minds that were open to change are thereby closed. No signal is given that they ought to be expecting to rethink their views of the nature of the learning process.

All this makes a shift to a relativistic style in the second-year course much more of a shock. Resistance to change in this direction is more likely the more that expectations have been firmed up around the idea of economics as a series of diagrams to be learned according to textbook gospel, and lectures as occasions for copying down PowerPoint slides rather than interacting with the lecturer or trying to make sense of a discursive presentation rather as if listening to and taking notes from a radio programme. If students see their role in lectures as consisting mainly of copying material down from a screen rather than *making sense of material* on the spot, we should hardly be surprised that they feel out of their depths when confronted with a lecturer who does not use this mode of delivery. Nor should there be surprise that they do not *build up* an increasingly detailed picture of the subject as the semester goes by and instead try to 'learn' the material in the last few weeks or days before the final

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examination. Dualistic teaching does nothing to demolish the idea that economics is nothing more than a set of tools that can be stored in student folders until needed.

It is not merely these deductions that lead me to advocate an early sowing of seeds of doubt amongst fledgling economists. My experience has been that it is easier to win a first-year class than a second-year class over to the idea of economics as a non-deterministic subject. First-year students did not panic at the idea of neoclassical, institutionalist and Marxian economists having different things to say about burning issues of the day when I taught an elective course on Australian Political Economy in this style; my experience was very similar to that reported by Barone (1991). Yet each time I have taken over a dualistic second-year sequel to a dualistic first-year core unit and tried to reshape it along non-deterministic lines I have found myself dealing with conspicuous student resistance and a desire on the part of students for me to convert everything to diagrams that they could learn. Deterministic first-year teaching in terms of a multitude of diagrams, often with a quite remarkable emphasis on mathematics by lecturers fresh out of North American doctoral programmes, seemed to have made it difficult for students to keep sight of the relevance of economic theory to making sense of practical problems. It must have been difficult for the first-year students to find time to read and think about contemporary economic issues if they were struggling to keep abreast of technical ones in their introductory courses (compare Siegfried *et al.* 1991: 21–2).

The resistance that I encountered was partly associated with difficulties that I had in recommending a single textbook that bore any obvious relationship with the range of materials being covered in the lectures. Given their lack of experience in taking notes in lectures that emphasized ideas and how they might be used and appraised, students craved a convenient printed source that they could compare with their own notes. My attempt at providing a solution to this difficulty was to write and distribute detailed lecture summaries (which were eventually turned into books: see Earl 1990, 1995). However, this strategy seemed counter-productive until I was introduced to Perry's work and in turn began to introduce my classes to the Perry progression at the outset and to remind them from time to time that in addition to teaching economics I was trying to help them advance along the Perry progression.

Without the Perry background, the problem: was that students, — particularly those from countries whose school systems reinforce dualistic thinkers — tended to memorize entire summaries and regurgitate them in the examination. Such students would home in on particular words in the questions as signs of which lecture summary they should regurgitate, rather than make any systematic attempt to answer the question in the way that one would expect of someone thinking at Level 5 in Perry's progression. All

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my warnings that this would be a disastrous way of tackling the examination went unheeded, for that was the only way they had. None of these students took up my invitation to discuss with me the results of experimenting with additional practice essays from past examination papers, to see whether they were succeeding in getting out of this habit prior to the examination.

By contrast, Barone and his colleagues built their course around a set of half a dozen or so key books from different schools of thought in economics and a 'contending perspectives reader' (which I presume consisted of Xeroxed articles and extracts). In the absence of suitable multi-paradigm textbooks, this strategy has much to commend it, particularly since it may help students to get away from thinking of a textbook as a bible. However, texts may still be indispensable for large classes unless small groups of students can be persuaded to pool their resources, for it is probably unreasonable to expect them each to purchase several books (and unreasonable to expect that libraries would purchase very many sets of the key texts) unless they happen to be, say, cheap Penguin paperbacks, each of which is representative of a particular school of thought. At the minimum, what is likely to be needed is a text which provides an overview and thereby enables diverse prime sources to be tackled with confidence.

Pluralistic economics texts already exist. At the intermediate to advanced level, I sought to fill the gap in microeconomics over a decade ago (Earl 1995), and was followed by Himmelweit, Simonetti and Trigg (2001). More recently Tim Wakeley and I (Earl and Wakeley 2005) have offered a business economics text that covers both mainstream and heterodox (mainly behavioural, evolutionary and institutionalist) microeconomics and mainstream and Post Keynesian macroeconomics. Over two decades have already passed since an exemplary multi-paradigm text on macroeconomics was first published, namely, Dow (1985). Dow's pioneering book is most unusual in beginning with a careful analysis of methodological issues and then presenting, in as unbiased a way as possible, guides to neo-Austrian, mainstream, Post Keynesian and Marxian thinking on macroeconomics. Dow quite deliberately avoided making any attempt to appraise these rival world-views and was criticized for this by Weintraub (1985) on the basis that she was leaving unanswered the question of why at least 98 per cent of economists in the US are members of the mainstream school. Although Dow's text came under fire rather on the basis that it is an unduly relativistic (Level 4) treatment of macroeconomics it may also be seen as a device for helping students to make informed choices between the rival paradigms or between these existing paradigms and ones which they might themselves be trying to put together. Dow teaches students about different ways of thinking and then leaves them to make commitments of their own.

From the standpoint of Perry's work, two rather different comments appear to be in order about Dow's text. First, it is perhaps unfortunate that

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she chooses to label one paradigm as ‘mainstream’ rather than ‘neoclassical’, for she may thereby be encouraging students who do not feel confident about making appraisals of their own to end up conforming with 98 per cent of economists in the US on the basis of nothing more than what the remaining two per cent might prefer to call the ‘million lemmings can’t be wrong principle’. Such users of the text would not be making a commitment in Perry’s and Shackle’s senses. Secondly, she might have helped her readers to make commitments (with a capital ‘C’) if she had presented some personal accounts by macroeconomists of each school who had examined a variety of approaches to macroeconomics before ending up making a commitment to a particular world-view. In the absence of such exemplars, student readers who have previously had mainly dualistic training in this area (via a typical IS–LM/aggregate supply and demand-based text) may tend to retreat towards a Level 3 view of macroeconomics (‘really, these debates just come down to discovering the underlying parameters’) rather than advancing towards Level 5 and Level 6 viewpoints.

Neither of these comments applies to a more recent, excellent text by Snowdon, Vane and Wynarzyk (1994). None of the eight schools of macroeconomic thought covered by these authors is labelled as mainstream and the book features interviews with leading members of each school. However, this text has less coverage of methodology than Dow offers. Taken together, the texts by Snowdon *et al.* (1994) and Dow (1985, republished in revised form in 1996) provide a splendid basis for teaching macroeconomics in terms of contending perspectives. The ‘no textbook’ excuse for not engaging in pluralistic economics teaching is looking increasingly feeble.

7. CONCLUSION

In this chapter I have explored tensions between three things that George Shackle advocated: the construction and debate of rival scenarios, studies of the stereotypes that people use for coping with uncertainty, and the teaching of economics in a way which encourages students to develop for themselves effective ways of thinking about economic problems. Studies of stereotypes used by students for coping may be taken to suggest that economists who are committed to undertaking the sort of teaching programme that Shackle advocated may be unwise to think that they are ‘home and hosed’ once they have overcome opposition from colleagues who would prefer to see students being taught the gospel only according to neoclassical precepts. The problem then becomes one of dealing with the range of expectations that one’s students have, which may largely have been formed in the light of experiences in courses taught in a non-pluralistic, deterministic manner.

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Lecturers cannot force their students to change their ways of thinking even when they have been given the opportunity to provide students with materials that may be construed as showing that the Truth is not obvious and that context-specific commitments may nonetheless be made to particular ways of looking at things. But they may be able to help their students to progress to higher levels of learning in the following four ways:

- (i) by challenging those of their colleagues whose styles of teaching involve spoon-feeding and who reward primarily skills in dealing with ‘objective tests’;
- (ii) by spending more of their time giving feedback after requiring students to construct for themselves experimental answers to relatively risk-free assignments;
- (iii) by looking for instances of higher-level analysis outside of economics that may be used as metaphors for the kind of thinking styles that might be helpful in economics; and
- (iv) by using their own experiences and the experiences of other economists to show that they can understand the struggles which their audiences are undergoing.

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