

Philosophical Perspectives on Lifelong Learning – insights from education, engineering and economics

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Abstract

How do we provide a philosophical perspective on lifelong learning, that is relevant to an engineer, an economist and an academic philosopher?

Introduction

The papers in this collection provide philosophical perspectives on lifelong learning. This particular paper, however, is less concerned with providing a philosophical perspective than with examining how we approach the provision of a philosophical perspective. How do we approach educational practice philosophically? Of course one can have a philosophy of lifelong learning, in the sense of a more or less developed theory about what it is and how it should be done. However, this paper is not concerned with a substantive philosophy of lifelong learning but with exploring how the traditional tools of analytical philosophy (conceptual analysis, ethical reflection, epistemological and ontological critique) can contribute to our understanding of lifelong learning. (The application of philosophical tools and the raising of philosophical questions in the field of education has, of course, been known as *the philosophy of education*).

In the first more traditional part of the paper we briefly describe these philosophical tools and apply them to lifelong learning. (This application could be seen as a conventional example of the philosophy of education).

We go on to suggest that analysis of “lifelong learning,” a pragmatic and a “family resemblance” concept (Wittgenstein) suggests that a more pragmatic philosophical approach might be fruitful – *a practical philosophy*. In the second (less traditional) part of the paper we describe this approach. We illustrate it (in application to lifelong learning) by reference to the use of narrative in educational research and to the practices of pragmatic disciplines such as engineering and economics. Engineering and economics, as disciplines which must work in the real world, might provide useful models for the lifelong educator

and insights in relation to the notion of a practical philosophy.

Finally, drawing on Wittgenstein's injunction to "look and see" we hope to show that practical philosophy finds a new kind of synthesis of educational theory and practice and that, though this approach is practical, it remains genuinely philosophical. In other words, we indicate, how we can "look" at the empirical world from a philosophical perspective.

The Philosophy of Education

Conceptual analysis

Philosophers of education have used "conceptual analysis" as a key tool in their exploration of aspects of education. The assumption has been that in getting clearer about key concepts such as "education", "teaching", "learning", "training" (or in the present case, "lifelong learning") we contribute to a better general understanding of education, and thus to a better policy, provision and practice of it.

Of course, what we mean by "conceptual analysis" is itself a philosophical question, which touches on what we say about the relationship between the concept (idea) and things and between concept and word. However, running through differing positions on such questions, is a common understanding of philosophy as a non-empirical inquiry, concerned with a host of questions that cannot be answered by the scientific method of observation and experiment on the empirical world. In order to answer their questions, philosophers have not traditionally looked at the real world in any detailed or systematic way.

Most philosophy of education has been implicitly concerned with the education of children, with compulsory schooling. This has been called a front-end model of education. Lawson was one of the first to use the philosophy of education explicitly in connection with adult education, (e.g. see his, "Concepts and Values in Adult Education"). Thus until the relatively recent movement to lifelong learning, conceptual analysis has not been explicitly orientated to educational concepts in lifelong perspective!

With this reorientation has come a number of conceptual insights. We have recognised that "lifelong learning" and "lifelong education" are often used as synonyms, and thus blur the traditional distinction between learning and

education. (See Field and Leicester and Leicester and Twelvetrees). The concept of lifelong learning has also been recognised as a pragmatic concept based on our desire to solve the problems faced by governments across the world (Aspin and Chapman 2000). It is a slippery term, lending itself to multiple variations of purpose and content, relying on its remarkable potential to mean different things to different people. (Kunzel 2000). It is a chameleon, Wittgenstenian family resemblance concept (Leicester).

Lifelong learning, has also been seen as a triadic concept, seeking to relate the vocational, the liberal and the political. (Key questions arising here are whether such a triadic concept of education is ideologically coherent and whether it is possible to achieve it in practice).

Traditional Philosophical Questions

Philosophy of education has also raised traditional philosophical questions, in relation to education. For example, the question of “free will” is obviously relevant to the idea of moral education, for the very possibility of such education seems to rest on the coherence of the notion of personal responsibility. We are only responsible for action we freely choose to do. Questions central to philosophy of mind are also clearly relevant to the notion of human learning. i.e. Questions about the relationship between mind and body and between mind and learning (Leicester and Twelvetrees 2005). Such philosophical questions, it might be supposed, will be increasingly asked with a lifelong learning orientation.

Epistemology

Since, traditionally, education has been taken to involve the development of knowledge and understanding, Epistemological questions have been recognised as having importance for the educator. This branch of philosophy has contributed much to philosophical educational investigation.

In these post-modern times, many have argued that the forms of knowledge (see Hirst) are not immutable and fixed. There are alternative forms of knowledge - context dependent knowledge.

This position, need not lead to an incoherent, full-blooded, relativism since there are constraints on what counts as knowledge, constraints that nevertheless allow for alternatives, for a multiplicity of voices and perspectives.

Ethics

Another key philosophical strand in our thinking about education has been an ethical one. Again, this is not surprising. The enormously influential philosopher, R. S. Peters recognised education as a normative concept (Peters date) and “lifelong learning” itself, blurred as if it is with “education,” carries this normative charge. Moreover, one of the motivating forces behind the movement to lifelong learning, has been the desire to widen participation in it (Taylor). Here the objective is an ethical concern to provide lifelong learning opportunities to all social groups, including those currently under-represented in post-school formal learning and its accreditations.

This Collection

This collection (Philosophical Perspectives on Lifelong Learning) could be seen as moving on from a philosophical perspective which at least implicitly, equates education with schooling. It also moves on from a philosophical perspective which explicitly seeks to redress this bias, with a focus only on adult education. It is a move from the philosophy of education to the philosophy of lifelong learning.

A philosophical perspective on lifelong learning raises the familiar philosophical questions, and uses the familiar tool of conceptual analysis, but in the context of lifelong learning. Indeed, this collection as a whole could be seen as just such an enterprise, and as an extended engagement with the terrain of the philosophy of lifelong learning which has been briefly indicated in this first half of the present paper. It contains analysis of the concepts of “lifelong learning” and “teaching quality”, and reconceptualises “adult education”. It pays attention to ethical values and epistemological questions. It applies these philosophical reflections in the context of policy and practice.

Practical Philosophy and Lifelong Learning

Not only could the focus of a philosophical approach to education shift from “education” to “lifelong learning”, in what follows we want to suggest that it may be timely to shift the philosophical approach itself. It seems to us that postmodern blurring of boundaries discernable in the literature on lifelong learning, and the epistemological shift to a more post-modernist approach to knowledge and the curriculum, support the notion of greater fluidity and plurality in our notion of what “taking a philosophical perspective” means. It is in tune with post modernist thinking to recognize that since concepts are not ahistorical,

timeless, culture free concepts, analysis of them may require taking greater account both of a social context and of the purpose of the analysis; greater account than that which philosophers have tended to take hitherto. However, how can we do this and yet remain with a conceptual rather than a sociological analysis? What follows is a preliminary attempt to answer this question, but there is much more work still to be done. This preliminary attempt pays attention to Wittgenstein's notion of a family resemblance concept. Some of the significant ideas about concepts, which were suggested by Wittgenstein have, it seems to us, implications for thus moving to a more practical philosophy.

Wittgenstein introduced the notion of a family resemblance concept, and with it the notion that we should look (in exploring concepts!) at the real world. It is not only that such a shift in our conception of a philosophical approach to lifelong learning, seems in tune with contemporary thought of which "lifelong learning" provides an example, it is also that the very fluidity and context shifting, chameleon nature of this concept seems to require greater attention to this real-world slippery imprecision. How can conceptual analysis of "lifelong learning" provide us with genuinely useful insights if attention is not given to the multi-stranded shifting usage of the word in a range of real life contexts? Wittgenstein introduced the idea of family resemblance concepts through the concept of "games."

Consider, for example, the proceeding that we call games. I mean board games, card games, ball games, Olympic games, and so on. What is common to them all? – Don't say "there must be something common, or they would not be called games." – but look and see whether there is anything common to all – For if you look at them you will not see something that is common to all, but similarities, relationships, and a whole series of them at that. And the result of this examination is: we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities; sometimes similarities of detail.

I can think of no better expression to characterise these similarities than "family resemblances", for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc, etc, overlap and criss-cross in the same way- And shall I say "games" form a family. (Wittgenstein, 1963, p?)

Wittgenstein’s insight that (some) words do not label common features or essences is an illuminating one. The table below illustrates how a variety of common (frequent) characteristics of games may, indeed, produce no “common” (shared) characteristics.

	Rule following	Recreational	Skilful	Competitive	Physical Exercise
Professional football	✓		✓	✓	✓
Chess	✓	✓	✓	✓	
Patience (cards)	✓	✓			
Child’s make believe game		✓			✓

Since there are no necessary or sufficient conditions for the use of the term “game” we must “look and see” how it is used and come to understand the “family resemblances” – the common but shifting characteristics. The question is: how should the philosopher, qua philosopher, approach this “looking and seeing?”

Firstly, the philosopher looking for the broad family resemblance characteristics of the use of any complex term, will bring an awareness of the complexity of the real world to the task!

Looking at and seeing complexity

This practical, pragmatic approach to conceptual analysis surely encourages a recognition of the cultural, social differences and similarities in our usage of “lifelong learning.” Morwenner Griffiths, recognising this fluidity in the concept of justice, has incorporated a plurality of voices, (stories) in her exploration of this concept and developed her own notion of “practical philosophy,” (Griffiths 2003). She distinguishes practical philosophy from applied philosophy. It is not about taking already worked out philosophical theories and applying them to the real world. Rather, practical philosophy “begins from an understanding that philosophy is rooted in the social practices with philosophy on educational practices rooted in educational practice.” Because her thinking was influenced by feminist philosophy, this practical philosophy was seen as engaging with the conditions of all people (“women and men, poor and rich”). There is a political dimension. The intention is to “reconceptualise the world” so that philosophy becomes more inclusive of the interests of women. “This practical philosophy is ‘philosophy as, with and for ...’ rather than philosophy about or applied to...” “

She uses stories as a way into the “diversity of significant particularities.” (Griffiths 2005).

Our notion of “practical philosophy,” in encouraging attention to the diversity of voices and experiences in the real world, also has this political tendency. Postmodernist epistemology recognizes that knowledge is validly constructed from the intersubjective agreement in the experiences of oppressed groups and not just from that of the educated group, (the group which writes papers) which has tended to exclude these voices hitherto. However, in this paper we are also suggesting that practical philosophy, recognizing that meaning is rooted in the (complex and context dependent) uses of a word, has implications for conceptual analysis regardless of any political commitments or implications.

Nevertheless, the use of a plurality of stories, illustrative of a variety of perspectives on an abstract concept such as justice, is one possible answer to the injunction to *look and see* how words are actually used in the real-world. (In keeping with the presupposition of our suggestions for a more postmodernist practical philosophy, there will, of course, be *more than one possible* way of approaching the idea of combining a philosophical investigation with the need to pay more attention to the contexts of a concept/ word in the empirical world).

As a small preliminary contribution to the development of a philosophical looking and seeing, in what follows, we explore how two other pragmatic disciplines, (engineering and economics), both of which use that which works in the empirical world as the test for their theory based practice, might provide insight; insight, that is, into the practice of lifelong learning and into how *practical philosophy* can “look and see” what works in practice, while remaining distinctively philosophical, true to its own conceptual concerns.

Engineering and Lifelong Learning

In what follows we explore engineering as a species of lifelong learning, show that the engineering process can provide useful models for the development of new courses in lifelong learning and finally see if the insights about the interaction of culture with engineering might throw light on our notion of practical philosophy.

Engineers as Lifelong Learners

The process of engineering is a species of lifelong learning.

The process is as follows:

1. The engineer is presented with a challenge, often of the form, “Use new

technology, design a functional item such as a TV or computer that will cost less to make than the competition's offerings and also have better performance than our existing model."

2. Now this new technology will be provided with data sheets etc, to specify the design parameters, but the manufacturers will not have experience of the application of this new material or device in your product. The engineer reads up on the new technology, hopes that he has sufficient understanding of the benefits and pitfalls new technology and produces his design.

3. As part of the process he will write a test specification, which when carried out will demonstrate that the new functional item is safe and performs its functions as required by the customers.

4. In a factory somewhere the first examples of his new designs will be manufactured, and the costs will be added up to see whether the items can be manufactured cheaply enough to be sold at the market price.

5. Eventually, the actual cost and performance will be known, and the engineer will now have learnt just how the new technology works in this instance.

6. If he was successful, the march of technology is such that he will immediately be required to produce an enhanced design that wrings the last ounce of performance out the current design by taking out all the slack of the first foray into new technology. That process is just as demanding, requiring as it does a full understanding of the design parameters in that particular application. If he has failed to learn any lessons from the Mk.1 item then he will fail in ignominy.

Lifelong learning is therefore an essential activity for an engineer, and the desire to continue learning is part of what drives engineers to produce more and more radical solutions to the world's problems. The engineering community continually learn more about the world and disseminate that information to each other. Each engineer in his own field reads publications and learns from his peer's experiences. Engineering giants such as Brunel and Whittle make their mark on the world not just by what they design themselves, but also by the learning passed on to other engineers to be embodied in their new designs.

Engineering and Lifelong Learning - The Engineering Process Can Be a Useful Model

The systematic method that engineers ensure that their design meets the customer's requirements may be used in the service of life long learning. The method is as follows:

Firstly the customer's requirements are translated into the top level engineering requirements. For instance, if the target customer wants a car that can out accelerate a VW Golf then the designer will look up the zero to 60 mph time for the Golf (let's assume 10 seconds) and derive the new requirement as, "the elapsed time zero to 60 mph shall be less than 10 seconds". Once all the engineering requirements have been "captured" they will flow down into the requirements for each element, (in this case the engine and bodywork of the car will be two of the elements). In our example, that requirement would flow down as a horsepower requirement for the engine, and a weight restriction for the bodywork. The engineer who has to design the engine knows how much power it has to produce, and will use that (and other requirements) to design the engine. He will produce drawings for the hundreds of parts in the engine, and as discussed above, each one will use the best technology available, and be made to work just as hard as possible without breaking. Along with the drawings will be the test specifications for each part, and the assembly instruction. The bodywork designer will be working to use aluminum as much as possible to reduce the weight of the car.

As the parts are manufactured each one is tested on its own, before assembly into a functional unit such as the engine. When complete, the engine will be tested against the power requirement, and the body will be weighed. Hence by the time that the process is over, and the finished car is ready for testing, the attainment of the customer's requirements is guaranteed.

Engineering - devising and evaluating an engineering design	Education – devising and evaluating lifelong learning provision
<i>Devising Phase</i>	
Customer's requirements (in his own words)	Potential learner's (client groups') learning needs in their own words
Statement of Engineering Requirements (performance needed to meet the customer's requirements)	Educator's assessment of the teaching required to meet the learning needs
Separation of overall performance requirements into requirements for each module of the whole design	Separation of overall teaching/learning requirements into requirements for each specialist module or session.
Design specification for each module	Design curriculum for each specialism
Design specification for each sub-module in each element	Design each module or session to cover the requirements for that

	specialism.
Evaluation Phase	
State the test requirement for each sub-module	State what we expect the learner to do or know for each element in the specialist module or session
State the test requirement for each module	State what we expect the learner to do or know for each specialism.
State what tests should be performed to prove that the module have been successfully integrated into a whole system.	State how we can test that the learner has successfully understood how each specialism relates to each other
Factory acceptance specification (Engineers prove to themselves that the system does what the customer requires)	State how we can satisfy ourselves that the learner has reached a satisfactory level of learning for the course as a whole.
Customer acceptance specification (How the engineers prove to the customer that it meets his requirements at his own premises)	Show the learner how much he has learnt in the area in which he wished to learn

Engineering and Lifelong Learning - Interaction of culture and engineering

It is interesting to see how cultural differences over time and between societies such the USA and Western Europe impact on the way that engineering problems are solved. There is often a *family of best solutions* rather than a single best design.

In the USA the emphasis is often on simplicity, reliability and cost effectiveness. It was in the USA that the idea of a single water tap in the middle of the sink for both hot and cold water first came into being.

In Western Europe the emphasis tends to be on the product being elegant and a pleasure to use. This very apparent in the recent spate new designs of elaborate and expensive cork removers for wine bottles that are appearing in our shops.

The difference between “Shaker” and Victorian furniture illustrate that these differences have existed for many years. To illustrate my point I have used

furnishings that everyone is familiar with, and it could be argued that such things are merely the fashion of the day, trivial frippery and nothing to do with engineering design. However, we will show that engineering design is influenced by the same cultural forces that shape the fashion of the day. Consider some engineering that the user rarely if ever sees. Inside the average American car is a large simple, reliable engine, with bland (and boring) characteristics. Inside the average European car is a small highly tuned and responsive engine that delights the driver by its responsiveness. The number of broken down vehicles to be seen on European motorway hard shoulders is a testament to the resulting lack of reliability, but we have seen no trend at all for Europeans to change their preferences, or European manufacturers to change their engineering direction. We conclude that something in the European culture leads engineers and users to choose a “best solution” that is less reliable than it could be because of the pleasure derived from its use.

Even in an apparently hard-edged practice like engineering we see that there is not just one solution, but a family of best solutions, and which of these we prefer will be partly conditioned by cultural factors.

In arriving at any one of the best engineering solutions, we can take various approaches. They range between first creating a mathematical model of the system and verifying its validity by comparison with the real world, to building a working laboratory model of the real system and by altering it in various ways to attempt to discover the limits of its performance. The former tends to be used for conservatively designed systems such as nuclear reactors or bridges, whereas the latter is used for innovative (and difficult to model) aspects of consumer items such as washing machines.

Applying this to philosophical enquiry, we can begin with an armchair conceptual analysis (for example of “lifelong learning”) and perhaps qualify this a little when we consider the real world! (The traditional approach of the philosophy of education). Alternatively, we can begin by looking directly at the real world (for example the many different uses of the term lifelong learning) and draw out the several general characteristics of these uses. We would see that uses of the term tend to carry normative implications. We would see that the term tends to be used in liberal educational and political educational contexts, as well as in vocational ones, but that the vocational dominate (This approach could be described as practical philosophy).

Practical economics

This section describes the methodological approach of some people in one group of practical economics. These are consultants, who differ from other economists in that typically they are employed on discrete jobs lasting from two weeks to a year, that they may not work for the same client more than once, that they are paid on results, and that their employability depends on how previous clients assess their performance. They are rather like doctors, in that they diagnose the problem and make recommendations for remedying it. They do not work on training or implementation. Bowbrick (1988) discusses this and other practical economics.

Terms of reference

The economist is given written terms of reference at the beginning of the project. There is usually a hidden agenda of things that the client does not care to have put in writing. The true agenda will also change during the consulting process, as the economist's questions raise new possibilities. The agenda usually changes again as the client reads the final report, getting a different view of what economic analysis can achieve.

The economist also has to address the concerns of other stakeholders. In public sector economics, the “client” may be one official in a Department. The economist owes a duty to the Department, the Ministry, other Departments, the government of the day, taxpayers, consumers, producers etc. The economist also has his own personal agenda which will change during the consultancy. Frequently the duty to the client who pays the fee and writes the terms of reference is drowned by the duties to other stakeholders.

Methodology

The methodology used is one of applying logic (theory) to facts, to produce a model of a specific situation, from which recommendations for change are made. Many different theories are incorporated into any model. This is not the favoured methodology of academic economists but it is necessary for practical economics, for several reasons.

Academic theory uses arbitrary, unrealistic or very simplified assumptions. It is “shorn of all irrelevant postulates, so that it stands as an example of how to extract the minimum of results from the minimum of assumptions” (Lancaster,

1976.) It is common to introduce ad hoc assumptions during the analysis, when analysis based on the original arbitrary assumptions comes to a dead end. Curiously, it is not considered necessary to rework all the analysis taking into account the new ad hoc assumptions. In one of the most cited theoretical approaches, more than a hundred explicit ad hoc assumptions and thousands of implicit ones are introduced during the analysis (Bowbrick, 1994). The introduction of explicit ad hoc assumptions makes it likely that the implicit assumptions necessarily introduced at the same time are contradictory, in which case the theory must be logically false.

Practical models, on the other hand, must be based on the facts of the particular situation, the structure of the market, the type of product, consumer preferences, information, the sociology of the producer, etc. It is impractical to have one variable in the model for every variable in the market, so it is necessary to simplify, but the simplification should still reflect the facts. A model or theory taken from a textbook will be a very poor predictor in any real market, because it has too few assumptions and these are unrealistic. Equally important, non-economist clients may not be able to criticise the economics in the report, but they can and will reject it if the facts are wrong. This means that it is neither acted on nor paid for.

The methodological approach of practical economists is that if the assumptions are realistic and the logic sound, the predictions will be correct. This is not the dominant academic view. The Popperian view is, oddly, that the logical theory, as opposed to the model, is falsifiable. The logical theory is thought to have some predictive value. The Friedmanite view is that it does not matter whether the assumptions or the theory are correct, as long as the theory is a good predictor. Neither makes a clear distinction between theory which is a string of logic, and a model of a real life situation. Neither is useful if the model is to be used for a one-off decision such as ensuring next year's food supply.

Determining the facts

Determining the facts is the next task. Statistics provide simple facts. However most statistics have been collected for other purposes, to inappropriate definitions. All statistics are wrong, and some are very wrong indeed. There are gaps in the statistics, usually on key issues. Complex facts may be found out by interview. These include policy, marketing strategy, competition or collaboration, consumer preferences, sociology etcetera. Many of these deal with the

relationships between the facts measurable by statistics. The interviewer may be faced with gaps, falsehoods and misperceptions.

Previous consultancy reports are a source of practical economic theory and of information. A previous report on the same topic – the market for the same product in the same country for example, presents a model which, if good, may be used as a first approximation, and adjusted as new information becomes available. A report on cotton marketing in Zambia is very useful in writing a report on cotton marketing in the Ivory Coast or Sudan -- there is a family resemblance in the technology, the product, and the economic analysis. A report on cabbage marketing in the UK, on the other hand, is irrelevant to most of Africa.

Theory used

To build their complex models, practical economists have to have a sound grasp of theory, as they have to build up complex models describing particular situations. They cannot just borrow theory in academic journals as it is typically a long complex chain of theory based on a small number of assumptions. If any of the assumptions are changed to bring in a breath of reality, the whole theoretical structure collapses. This means that very little theory in academic journals can be applied directly to practical economics. It is not unusual to find a high-status, mainstream economics journal that has no theory that could conceivably be applied to the real world. Practical economists tend to read more practically-oriented journals like the Journal of Agricultural Economics, and to write for them. When they write theory, they are not looking for the response, "I cannot understand it. He must be very clever," but rather, "That's interesting. I wonder if something like that could be happening in the market I am working on. I will adapt the theory to fit into my model." The readers are looking for a family resemblance.

Testing the model

As one acquires this information, one builds up a complex model. This should explain all information already collected, and all new information gained is tested to see if it fits the model. If it does not, either the information or the model is incorrect. The information must then be crosschecked against other sources. This is the only way to deal with missing or wrong information. The result should be a large, complex, interlinked, model which explains the phenomena of the real world. There is a constant process of testing the model against new information.

The model can also be tested by seeing if it explains historical phenomena which were not included in the model. This is the only realistic way to deal with missing or wrong information.

Short-term consultants do not have the luxury of being able to test their models by predicting the future, nor can they fine-tune them by trial and error over the years. It follows that they must have some way of refuting their own models if wrong, and of refuting the many previous consultancy reports which are contradictory, or which do not apply to this situation. Individual academic economists have criteria for rejecting papers for publication, but once the papers are published, there are no accepted criteria for saying a model or theory is refuted, and nothing vanishes from the canon except on the grounds that it is unfashionable. Incorrect assumptions, contradictory assumptions, incorrect logic, lack of testing, false predictions or all of these are not accepted as a refutation. Refutation is not being taught, even though it is a fundamental skill for the practical economist.

Practical economists refute by testing the assumptions, testing the logic, testing whether the model explains all the facts included in it and testing whether the model predicts new facts not already included in it.

Predictions and Recommendations

Using this model it is possible to make predictions of what would happen if various adjustments were made, changes in prices or regulations for instance. Recommendations or options are then passed to the client.

Optimizing techniques

Economists seldom use their toolbox of optimizing techniques. Often it would take so long that the decision had already been taken before the report was produced. In fact, consultancies seldom last long enough to produce an optimal solution.

Where optimizing techniques are feasible, as in farm management economics, they may be rejected by the client. In Ireland, it was found that the optimum production plan was producing celery or strawberries. However, in Ireland real men keep cattle, so the advice was rejected. There is also a risk in producing strawberries rather than milk, with its guaranteed price.

Even if one were to produce an optimal solution that was based on realistic assumptions it is quite possible that variables in the model like the strawberry yield, or ones outside the model like the world oil price, will not be as assumed. All the information going into the model is subject to error anyway. This means that there is a very high risk that the outcome will not be exactly as predicted. In some cases, the likely return is much the same even if the assumptions turn out to be wrong, so the cost of risk is small. In other cases, the cost of risk is high, and the client may prefer to go for a solution which is markedly suboptimal in expected profit, but is low risk.

Practical economists also recognise that there is a risk their model may be wrong, as well as that the assumptions may be wrong. To reduce this risk, a stable model is constructed -- a broad foundation of realistic assumptions with a low edifice of logical theory on top of it -- complex and interlocking. This may be contrasted with the publishable academic model of a long chain of theory based on a foundation of a few assumptions. If there is any change at all in the assumptions or any flaw in the theory, the whole edifice collapses -- rather like balancing a pencil on its point.

Practical economists are also reluctant to base any of their recommendations on a long chain of theory or weak assumptions: that there is an honest and efficient civil service or that farmers will read the newspaper and believe its price predictions.

Dissemination

Finally, practical economists recognise that their work is wasted if their report is not read, believed and acted on. They would also like to see it paid for, and to get more jobs from the same client.

Economics – examining a situation and making recommendations for use of resources	Education – devising and evaluating lifelong learning provision for better use of resources (the self)
objectives	
Customer’s stated objectives.	Potential learner’s (client groups’) learning needs in their own words
Finding out unstated objectives (this continues throughout study)	Lifelong learning is discovering one’s real objectives.
Identifying other stakeholders and finding out their objectives (This continues throughout study)	Identifying the objectives of other stakeholders, who may include the state, the employer, the family and society.
Identifying the economist’s own objectives.	Identifying the educationalist’s own objectives.
diagnosis	
Find out the facts of the situation	
Note how stakeholders and others have different perceptions of the facts.	
Construct an economic model which explains the facts	
Test whether the economic model explains all the facts – the assumptions used to make the model, other facts that come to light and historical facts.	
Note how this model differs from those of the people who have to be convinced.	
Identify remedies	
Using the model, determine how the situation can be changed to situations more acceptable to some combination of stakeholders (someone will suffer).	
Assess the outcomes. E.g. by size of effect, long term or short-term, social justice, gender impact,	

environmental impact, sociological impact, political and other importance of stakeholders most affected.	
Assess the methods of achieving outcomes: e.g. by probability of them working, risk, cost, political acceptability, micro-political acceptability, availability of finance.	
Decide on one or two options to recommend.	
The prescription	
Write recommendations that are acceptable to the client and other key stakeholders.	
Mention or not the impact on other stakeholders.	
Get key stakeholders to read the report, believe it, act on it.	
Get paid.	
Evaluation	
Evaluation is not usually an option open to the short-term consultant. Trial and error is only a possibility for long-term employees.	
The key evaluation of the model for logic and consistency with the facts is done at an early stage.	
It is always possible to explain away a failure: e.g. "It was not implemented properly", "The world oil price changed". Nobody involved with the project wants to examine its failure.	

Conclusion

This is a many stranded paper with two distinct parts. In part one we set out very briefly what we mean by taking a philosophical perspective on lifelong learning. This account is in tune with approaches established in the traditional philosophy of education. In part two we attempted to develop a notion of a more “practical” philosophy. This approach requires us to “look and see” how a word such as “lifelong learning” is used in a complex, dynamic variety of contexts in order to establish broad characteristics of the use of the term, rather than to work out a set of necessary and sufficient conditions for its application. We suggested that there is work to be done in finding ways to “look and see” philosophically. As a preliminary attempt at this work, we made reference to Griffith’s use of stories in her attempt to explore the concept of justice through the significant particularities in the experiences of an inclusive range of people, in her attempt to explore the concept of justice. Could not this be usefully undertaken in relation to the concept of lifelong learning?

We suggested that (as in the practice of engineering and economics) philosophers must look at the real world in some detail before beginning their analysis and then move between the analysis of a term and actual uses of it in an ongoing qualification of any over simplification of that analysis.

There were also useful insights from the “practical economist.” While it may be easy to churn out publishable theoretical papers based on arbitrary, unrealistic or very simplified assumptions, these do not refer to the real world, and are unlikely to be accepted, acted on or paid for. Practical economists must use assumptions and analysis that reflect the complexity of the real world, and of the situations they are examining.

However, we are also reminded, that determining the facts is complex and theory laden. Conceptual analysis must be provisional – increasingly complex and qualified. Indeed, perhaps conceptual analysis, particularly of complex terms, would be more manageable if conceived as an investigation into one aspect of the concept. (For example, an analysis of modern, non-vocational uses of the term lifelong learning).

Perhaps not all concepts are “family resemblance” concepts, or, at least, have less “criss-crossing” similarities and differences. However, “lifelong learning” is, we suggest, particularly chameleon and contestable. It holds apparently oppositional ideas in creative tension;

Cradle-to-grave *and* continuing adult education
Triadic *but* with a vocational emphasis
Idealistic *but* pragmatic

Our concluding suggestion is that to similarly hold in creative tension both armchair reflection and looking at the world will enrich our understanding of any term which has such historical, social and cultural complexity.

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