Learning, Teaching and Education Research in the 21st Century
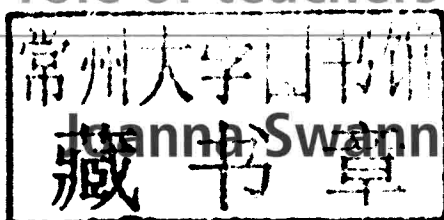
An Evolutionary Analysis of the Role of Teachers

Joanna Swann

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continuum

To the memory of Tyrrell Burgess

I may be wrong and you may be right, and by an effort, we may get nearer to the truth.

—*Karl Popper,* The Open Society and Its Enemies, Volume 2: Hegel and Marx

But as for certain truth, no man has known it,
Nor will he know it; neither of the gods,
Nor yet of all the things of which I speak.
And even if by chance he were to utter
The final truth, he would himself not know it;
For all is but a woven web of guesses.

—*Xenophanes, translated by Karl Popper*, Conjectures and Refutations: The Growth of Scientific Knowledge

'Do no harm' (and, therefore, *'give the young what they most urgently need, in order to become independent of us, and to be able to choose for themselves'*) *would be a very worthy aim for our educational system, and one whose realization is somewhat remote, even though it sounds modest.*

—*Karl Popper*, The Open Society and Its Enemies, Volume 2: Hegel and Marx

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The Purpose of This Book 1

We all have our philosophies, whether or not we are aware of this fact, and our philosophies are not worth very much. But the impact of our philosophies upon our actions and our lives is often devastating. This makes it necessary to try to improve our philosophies by criticism. This is the only apology for the continued existence of philosophy which I am able to offer.

—*Karl Popper,* Objective Knowledge: An Evolutionary Approach

Introduction

This book has been designed to challenge some widespread assumptions about learning, teaching and education research – assumptions embedded

in the practices of many teachers and in the design of most education institutions worldwide. The assumptions I set out to challenge are those that, as I shall argue, fly in the face of what is now conjecturally known (following Karl Popper's evolutionary analysis of learning) about what does and does not happen when learning takes place. In contesting these assumptions, I also expose and weaken one of the deep roots of authoritarianism in human society. The evolutionary analysis of learning strongly suggests that authoritarian approaches to teaching – those that view the learner's relationship to the teacher as one of dependence (Meighan and Siraj-Blatchford, 2003 [1981], Part 3, in particular, p. 214) and thereby inhibit students from engaging in self-initiated and self-directed exploratory activity – are not as conducive to the promotion of learning as is commonly supposed. In this regard, I use criticism (as construed in the above quotation from Popper, 1979 [1972], p. 33) as a tool to encourage improvement, by strengthening the case against the continued adoption of practices that foster learner dependence.

In addition, this book offers theory for use by those who wish to create or defend the opportunity to practise in accordance with non-authoritarian values. My intention in this regard is to provide philosophical argument to support the defence, pursuit and development of non-authoritarian educational agendas. Relatedly, the book outlines some tested alternatives to common practices. My intention here is to provide food for thought for those individuals and groups already striving to teach in accordance with non-authoritarian values or who wish to begin to do so.

A more ambitious aspiration became apparent while this book was being written: I hope the book will contribute, at least in a small way, to the pursuit of human transcendence. To this end I propose a speculative account of what teachers need to do in order to facilitate the kind of learning that may lead to significant improvements in how we treat each other and ourselves, and in the way we use the world's resources (Chapter 11). Transcendent learning, as I see it, is the kind of learning that enables us, collectively and individually, to progress well beyond what has hitherto been habitual and/or commonplace in our thinking, practices, strategies and institutional systems. It is the means by which, to use Popper's imagery, we 'lift ourselves by our bootstraps out of the morass of our ignorance' and 'throw a rope into the air and then swarm up it – if it gets any purchase, however precarious, on any little twig' (Popper, 1979 [1972], p. 148).

1 Whom this book is for

This book is for anyone who views her- or himself as a teacher. It is for qualified teachers, student teachers, teachers of student teachers, and lay teachers of various kinds, not least parents. Much of the book has been written with no particular student age range in mind, but the thrust of the core argument, including the detailed examples in Part 2 and some of the other examples scattered throughout, is directed towards the teaching of children and, to a slightly lesser degree, adolescents. I have taught in higher education for more than 13 years, but children are the learners with whom I have had the most experience as a professional, and childhood is a period when individuals' long-term development can be significantly enhanced or undermined by their experience of teaching. What I propose regarding the teaching of children and adolescents in schools, if adopted, would have profound implications for teaching in further and higher education.

Although I have spent most of my life in the United Kingdom and have clearly developed my thinking in a Western society, the content of the book is not directed towards any specific country or culture. The principal arguments are not context dependent, and the target readership is global.

I am aware that many readers are likely to be more interested in some elements of the discussion than others. Extensive cross-referencing and some repetition of key points have been included to help the reader who is dipping in here and there instead of reading the chapters sequentially.

2 The nature of the argument

Although my argument is philosophical, it does not focus on words and their meanings, and I do not shy away from the discussion of competing statements of fact – this book is not in the tradition of linguistic philosophy. As a philosopher of education I am, for the most part, mindful of Popper's 'anti-essentialist exhortation':

> Never let yourself be goaded into taking seriously problems about words and their meanings. What must be taken seriously are questions of fact, and assertions about facts: theories and hypotheses; the problems they solve; and the problems they raise.

> (Popper, 1992a [1974], section 7, p. 19)

It is important here to recognize a distinction between the facts – that is, what is actually so – and statements of fact (propositions about what is so) and assumptions of fact (whereby the nature of what is so is assumed). The facts are often elusive and, as discussed in later chapters, our knowledge of the facts cannot be made secure. It follows that it is best to view all statements of fact and assumptions of fact as provisional and contestable – hence my reference below to alleged facts.

The core of my argument (in Chapter 2) is a challenge to a commonsense assumption of fact that permeates most education institutions, many teaching practices and much theorizing about learning, teaching and research, namely that *'some learning involves the absorption of informational elements from outside the learner'*. The opposing idea that I present and defend, following Popper, is that *'learning never involves the absorption of informational elements from outside the learner'*. The commonsense idea and my Popperian alternative are mutually contradictory; they cannot both be true.

A rational decision as to whether the Popperian *'learning never involves the absorption of informational elements from outside the learner'* is preferable to the commonsense *'some learning involves the absorption of informational elements from outside the learner'* requires substantial engagement in philosophical thought. Both ideas are metaphysical rather than scientific. They purport to describe what is so in the world and, although they have stimulated the development of scientific theories (in respect of my Popperian theory, see Chapter 9), they are not themselves susceptible to scientific testing; that is, neither can be effectively challenged by reference to hard evidence. They can, however, be critically discussed.

When those who would defend the commonsense idea cite evidence in its support, their favourable interpretation of the evidence is inevitably the outcome of assumptions that are non-scientific but which can be challenged philosophically by argument. In challenging the commonsense idea, I mention research evidence from the fields of psychobiology, neuroscience and consciousness studies, but the premises of my argument are similarly non-scientific. Although the idea that learning never involves the absorption of informational elements from outside the learner may appear to be potentially refutable, a difficulty lies in the nature of what is at issue, namely learning. Learning is a process that often has some potentially observable outcomes, but learning cannot itself be observed. As discussed in Chapter 4, our view of learning becomes distorted if we reduce it to a set of observable outcomes.

The commonsense idea about learning and its competing Popperian alternative – expressed above as statements of alleged fact – are very important, because they have profound implications for what we do as learners and teachers, and for the practice of education research. Simply put, it makes a difference whether you act on one idea rather than the other. If teaching, particularly its conduct and organization in the context of institutions, were to be widely reconceived in light of the idea that '*learning never involves the absorption of informational elements from outside the learner*', then the outcomes of teaching would be both significantly different and better – not only for individual students but also for the societies in which they live.

3 Facts and values

You may be wondering how my argument will proceed from a discussion of fact – about what does not happen when learning takes place – to an argument in favour of non-authoritarian approaches to teaching, construed here as those in which learner autonomy is fostered and learner dependence is discouraged. The link is an account of what happens when learning takes place, one that shows that the opportunity for self-directed exploratory activity is crucial to the advancement of learning (Chapters 3 and 5). Such activity is not an optional extra or something to be made available to learners only after they have acquired a prerequisite sum of knowledge or skills.

As implied above, I have taken the opportunity to promote non-authoritarian values by drawing on Popper's evolutionary analysis of learning to expose a commonly accepted myth about learning. Drawing on Popper's analysis, I present a new theory of what happens when learning takes place, in light of which I highlight seven sets of key facts about learning (Chapter 5, section 1), most of which are little known and, when known, may subsequently influence what people value. Questions of fact and questions of value arise together in situations but can nonetheless be differentiated (Popper, 2002b [1945], addendum 1, section 13; 1992a [1974], section 40). A question of fact – that is, a question of whether or not something is the case – can be distinguished from whether or not we like or dislike the particular fact (or alleged fact). One may question assumptions of fact about how children can best be helped to learn, and one can question assumptions of value – assumptions about what is to be considered good – about how children ought to be treated. However, although facts and values can be differentiated, what

people believe to be the case tends to influence what they value, and, perhaps to a lesser degree, what people value tends to influence what they are prepared to believe. People who believe that children and adolescents have the potential to learn more when their opportunities for autonomous activity are restricted may be disinclined to value approaches to teaching children that have as a primary aim the advancement of learner autonomy. If such people subsequently develop the view that opportunities for self-directed exploratory activity (seen here to involve self-monitoring, self-evaluation and self-regulation) are crucial to learning and that exploratory activity that is both self-initiated and self-directed is vital for the transcendent learning of which humans are capable, they may then be more open to exploring how teaching can best support the development of students – children, adolescents and adults – as autonomous agents. I say 'may' because they may decide instead that it is preferable to constrain learning rather than to allow students greater autonomy.

I am not suggesting that we should attempt to view the content of learning in value-neutral terms, and it would seem inevitable, and only proper, that we are all inclined to favour the learning of some things and discourage the learning of other things. But there is nonetheless an important distinction to be made between, on the one hand, constraining learning by attempting to focus student attention on a lengthy prescribed agenda of subjects, topics or problem areas, regardless of the students' preferences, and, on the other, merely ruling a few fields of learning off limits (for moral reasons or because of resource constraints) and devoting our energies to encouraging students to take responsibility for decisions about the content of their planned programmes of study. I argue that the former, the conventional approach to the curriculum, needlessly limits autonomous activity on the part of the student and by so doing limits student learning, while the latter – the use of student-initiated curricula – does not (Chapters 6 and 7).

4 The nature of teaching

Despite my general concern to avoid focusing on problems about words and their meanings, I have nonetheless found that providing a few definitions in the early stages of a discussion can assist communication. When presenting an evolutionary analysis of learning, there are some terms to which particularly broad meanings are ascribed, and it can be useful to highlight how these