

**Virtue Epistemology:
Some Implications
for Education**

SP Moran

Doctor of Philosophy

2011

Virtue Epistemology: Some Implications for Education

Seán Moran, BEd, BA, DPSE, MA

Thesis Presented for the Award of

Doctor of Philosophy

Dublin City University, St Patrick's College, Drumcondra

Education Department

Supervisor: Prof. Joseph Dunne

June 2011

Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: _____ **(Candidate)**

ID No.: 58262903

Date: 28 June 2011

Acknowledgements

Thanks are due to my supervisor, Prof. Joseph Dunne, for his guidance, *sungnōmē* and courteous elenchus; to Dr. Eileen Brennan and Dr. Christopher Cowley for reading and commenting on earlier versions of chapters 1 and 2; to the internal and external examiners, Dr. Jones Irwin and Prof. David Carr, for an interesting viva and some useful suggestions; to my colleague Ms. Mary Fenton for her support; and to my beloved S.

Table of Contents

Abstract	9
Introduction	10
Chapter 1 - Overview of Virtue Epistemology.....	22
Introduction	22
Traditional Definitions of Knowledge	22
Symbolic Conventions and Abbreviations	26
Some Problems of Traditional Epistemology	27
Changing from a Belief-based to an Agent-based Epistemology	30
A Precursor to Ernest Sosa’s Epistemology: Robert Nozick’s ‘Tracking’ Model.....	31
Virtue Epistemology (i) - Ernest Sosa	33
Sosa’s Agenda	36
Safety and Sensitivity	37
Two Grades of Knowledge	42
An Archery Metaphor for Knowing.....	44
Departures from Greek Tradition of Virtue	46
Virtue Epistemology (ii) - Linda Zagzebski.....	47
Zagzebski’s Task.....	48
Differences Between Zagzebski and Sosa	51
Aristotle’s Distinction Between the Intellectual and the Moral Virtues	52
Zagzebski on the Development of Intellectual Virtue in the Agent.....	58
Flourishing as a Unifying Principle	63
Conclusions of Chapter 1.....	64
Chapter 2 - Knowledge and Testimony	67
Introduction	67
Historical and Contemporary Philosophical Stances towards Testimony.....	68
Plato’s Dismissal of Testimony as a Knowledge-source	68
Descartes’ and Locke’s Dismissal.....	71
Hume’s Endorsement.....	74
Legal and Natural Testimony	78
Proper Trust in Testimony	80
Language Learning and Testimony	82
Auditing of Testimony: Reductionists vs. Anti-Reductionists.....	83

Testimony as Important as Perception, Memory and Reasoning.....	87
Safety and Sensitivity of Testimony.....	88
Knowledge as a Communal Asset	93
Empirical Questioning of Testimony’s Value.....	94
Monitoring Testimony for Trustworthiness	96
The Cultivation of an Epistemically Virtuous Approach to Testimony	98
Conclusions of Chapter 2.....	100
Chapter 3 - Other-regarding Epistemic Virtues	102
Introduction	102
Self-regard and Other-regard.....	103
A Virtue-Epistemic Approach to ‘The Other’	107
Virtue Ethics and Regard for the Other	108
Epistemic Virtues as Other-regarding	110
Complementary Intellectual Virtues	112
Beyond the Epistemic Dyad	116
A Different Perspective: The Field as ‘Other’	119
The Role of Benevolence in Regulating Regard for the Other	121
Speaking Out.....	122
Attunement Towards the Other’s Epistemic Needs.....	126
The Dangers of Epistemic Insincerity	128
Epistemically-justified Dissimulation	131
Childhood Myths	135
The Importance of Timely Intervention	138
Taking Indirect Routes to Knowledge	140
Conclusions of Chapter 3.....	142
Chapter 4 - Reliabilist Virtue Epistemology and Education.....	145
Introduction	145
Aims of Education.....	148
Developing Reliabilist Construals of Knowledge in an Educational Context	150
Suitable Range of Propositions for the Learner – Including ‘Threshold Concepts’ ..	151
Believing That <i>p</i> versus Being Able to State “That <i>p</i> ”	157
Sensitivity Towards Counterfactive Possibilities	159
Acquiring Safe Beliefs	160
Subjunctive Conditionals and Belief Formation.....	160
Artificial Intelligence Theory: Revising the Doxastic Web.....	165
Belief Revision, Contraction and Expansion	166

Closure of Belief Sets Under Logical Entailment.....	170
Analysing Learning, Using Reliabilist Virtue Epistemology and AI Theory.....	173
Belief Revision and Epistemic Virtue.....	173
Example of Non-sensitive True Belief Acquisition in the Classroom.....	176
The Importance of Counterfactuals for Learning.....	178
Socrates on Cognitive Dissonance.....	180
Legislating Between p and $\sim p$ in the Learning Situation.....	182
Elenctic Moves to Cause an Aporia.....	186
The <i>Feldwege</i> and the <i>Holzwege</i> : Two Kinds of Learning Journey.....	189
Sosa and Belief Revision.....	190
Virtuous Counterfactuals in the Classroom.....	191
Conclusions of Chapter 4.....	194
Chapter 5 – Responsibilist Virtue Epistemology and Education.....	196
Introduction.....	196
Zagzebski’s Definition of Knowledge.....	196
Cultivating Epistemic Virtue and Knowledge.....	199
Important Epistemic Virtues.....	199
The ‘New Athene Problem’.....	201
<i>Telos</i> and <i>Skopos</i> : Different Ways of Viewing Success.....	204
<i>Halbbildung</i> and <i>Bildung</i> : Counterfeit and Genuine Learning.....	206
Virtuous Responses to Aporias.....	209
Palinodes: Statements of Belief-Change.....	214
Virtue Contextualism and the Teacher’s Role.....	215
Virtuous Roles of the Teacher.....	219
1. Teacher as Knower.....	220
2. Teacher as Bearer of Other-Regarding Epistemic Virtue.....	221
3. Teacher as Epistemic Exemplar.....	222
4. Teacher as Mystery-Alerter.....	228
Delight as a Mark of Virtue.....	230
Open-mindedness.....	233
Habituation to Cultivate the Intellectual Virtues.....	239
Teacherly Virtues.....	243
Teacherly Epistemic Virtues.....	244
An Example: The Social Epistemic Virtues.....	245
Teacherly Virtues as Means Between Extremes.....	247
Conclusions of Chapter 5.....	249

Chapter 6 - Implications of Virtue Epistemology for Educational Practice	250
Virtue Reliabilism and Education	257
Virtue Responsibilism and Education.....	260
Virtuous Testimony and Education	261
How Teachers Ought to Act.....	265
How Learners Ought to Act	267
Final Implications and Conclusions	268
Bibliography	273
Appendix A: Summary of Intellectual Virtues and Vices in Aristotle, Sosa and Zagzebski.....	298
Appendix B: Table Showing How the Learner’s and the Teacher’s Epistemic Virtues Might Co-ordinate	301
The Over-arching Teacherly Virtues	301
The Virtues of Doxastic Trust.....	302
The Virtues of Enquiry	303
The Virtues of Creativity.....	304
The Virtues of Scholarship.....	305
The Social Intellectual Virtues.....	306

Abstract

Virtue Epistemology: Some Implications for Education

Seán Moran

The new field of virtue epistemology has implications for educational debate. In order to identify these implications, I explore the seminal writings of Ernest Sosa and Linda Zagzebski and develop them in directions promising for education. Both see knowledge as true belief arising in a socially-situated cognitive agent from epistemically-virtuous acts, rather than the traditional construal of true belief to which an idealised, individual knower has a duty to assent because of particular properties of the belief. They differ in emphasis, however: Sosa stresses reliable mechanisms, while Zagzebski accentuates virtuous motivation.

In dealing with Sosa's reliabilist virtue epistemology, I analyse and build on his precursor Robert Nozick's model in ways propitious for education, including an extension of his use of formal logic, and the importation of some concepts from artificial intelligence theory. One significant outcome of my work on reliabilist virtue epistemology is the importance of subjunctive conditionals, and thus a more nuanced view of educational propositional targets, involving both p and $\sim p$. Sosa's two-tier model of knowledge is also addressed.

I compare Zagzebski to her historical forebear Aristotle, and then develop some lines of thought congenial to education. Zagzebski's responsibilist virtue epistemology leads to named intellectual virtues. I supplement these and show how they can be co-ordinated between teacher and learner. Substantial consideration is also given to other-regarding epistemic virtue and to testimony.

The model of learning and teaching defended amounts to virtuous belief-modification, carried out by an epistemic agent (the learner), using intellectual virtue to bring his doxastic web into closer cognitive alignment with reality via intersubjective triangulation using the webs of others (particularly that of the teacher). I argue that a combination of the two approaches – virtue reliabilism and virtue responsibilism – yields a richer, more decent basis for education than rival conceptions, such as technical rationality, can provide.

Introduction

This thesis in the philosophy of education tests the conjecture that the new field of virtue epistemology has interesting and important contributions to make to educational discourse and practice. By engaging with education, virtue epistemology also stands to gain; for, seen in this new light – in which certain parts of the field take on a greater prominence during their development in ways congenial to education – it is itself clarified and enhanced. The test, it will be argued, yields a positive result: virtue epistemology is indeed a valuable resource to be drawn upon by education. Moreover, and reciprocally, virtue epistemology is shown also to benefit.

Because of its recent emergence, virtue epistemology is still relatively unknown to educational theorists; and virtue epistemologists have made little attempt to address educational concerns. I therefore provide a selective account, emphasising those parts which show potential for education. This filtering, through teacherly sensibilities, unavoidably excludes or diminishes the importance of certain features that epistemologists would deem to be important,¹ but it does allow a conversation to take place over areas of common interest. Before mediating between the two discourses – virtue epistemology and education – I provide an exposition that sets the former in the context of traditional epistemology and begins a critical engagement with its key features.

I then extend a number of topics in educationally promising ways, prompted by cues from virtue epistemology. Two notable examples of this process are explorations of the linked notions of the virtuous testifier and the other-regarding epistemic agent. Since both of these concepts are already present in virtue epistemology (but in an under-theorised form), and their potential importance for educational discourse seems clear, I develop them in virtue-theoretic directions. The early chapters are thus more than just a description of the main commitments, principles and debates of virtue epistemology, for they also involve some new contributions to the field itself. Because these contributions were originally motivated by pedagogical concerns, they have some traction too in the field of education. So, ideas such as the virtuous testifier and the

¹ For instance, the Cartesian concern that we might be dreaming has little *prima facie* interest for an educator, even though prominent virtue epistemologist Ernest Sosa gives much emphasis to this question.

other-regarding epistemic agent are then used as ways of conceptualising parts of the teacher's role – analyses which have hitherto been almost entirely absent from the educational literature.

The well-educated person is seen here to be one who possesses a coherent web of beliefs, the accuracy, robustness and value of which are due to the epistemic virtues, and which thus amount to knowledge. Moreover, he² has cultivated these intellectual virtues to a mature level, so that his web continues to evolve in the light of new epistemic input, thereby achieving an increasingly enhanced cognitive congruence with reality. By mining the resources of virtue epistemology, I present an account of the teacher's role in supporting both the learner's development of these virtues and his acquisition of knowledge.

This is not to claim that knowledge acquisition is the only goal of education, however. Although this is a contested area, cases can also be made for including such aims as moral development, the cultivation of aesthetic sensibility and initiation into worthwhile forms of life. Indeed, the cultivation of the epistemic virtues could be seen as part and parcel of moral education. Nevertheless, this work will confine itself largely to propositional knowledge acquisition, since this is the part of the educational project which relates most directly to epistemology. One benefit of doing so is that it can maintain relevance to a number of conceptions of the aims of education: conceptions which may differ on the relative importance of the social, aesthetic, spiritual, political, moral and physical dimensions, but which all recognise the claim that knowledge ought also to be centrally included. It need not be the single defining goal of education, but it is hard to conceive of a list of educational aims from which it is absent.

Thus, the student as epistemic agent – as knower – takes centre stage. It is part of his well-being qua rational animal that he should acquire knowledge, for, as Aristotle puts it, 'All men by nature desire to know'.³ Our task is to develop an account that explains what it means to know, how the learner's epistemic flourishing occurs, and how the teacher may support it. At first blush, virtue epistemology seems well-placed to

² The reasons for adopting this gender convention are explained later (p.27).

³ Aristotle, *Metaphysics* bk.1A (980a23) [tr. W.D. Ross, 1925] *The Complete Works of Aristotle: Revised Oxford Translation* (Bollingen Series) (ed. J. Barnes) (Princeton: Princeton University Press, 1984).

provide some insights into these questions, and in turn to benefit from an interaction with educational matters. We have already noted that virtuous testifying and the notion of an other-regarding epistemic agent are potential topics for discussion and development, but there are others, as we shall see. Both epistemology and education are concerned with knowledge, so a dialogue between the two fields can enrich them both, by articulating and examining from different perspectives some areas of mutual interest relating to knowledge-acquisition.

The work is also loosely aligned with a project which seeks to provide a more decent undergirding for education than that offered by technical rationality and which revives virtue theory so to do. Much important work has already been undertaken in exploring the possibilities of virtue *ethics* for illuminating certain aspects of education (particularly moral education): this thesis mediates between virtue *epistemology* and education, a project which has hitherto been largely neglected.

In attempting to fill this lacuna, I use examples from all phases of education: from the initial learning of one's mother tongue, through schooling and on to undergraduate and postgraduate study.⁴ This does not render the discussion overly generic, though, for there is a recognition that different epistemic virtues ought to gain prominence during the various phases of education. However, there is a unity about the educational project – leaving aside discussions of pedagogy vs. andragogy – which means that most of the intellectual virtues should be promoted at every stage, for to do otherwise is to risk an intellectually harmful imbalance. For example, if what I term 'the virtues of doxastic trust' are over-emphasised in the early years, then there is a danger that the intellectual virtues associated with enquiry and creativity may be underdeveloped when needed later: a critical period may have passed.

On becoming aware of the new philosophical sub-discipline of virtue epistemology, I recognised its particular potential for challenging the unreflective importation of technical rationality into the human practice of education.⁵ So, while the burden of this

⁴ A number of examples are from science education, since that used to be my speciality when I was a school teacher.

⁵ Since a critique of technical rationality – although an important motivating factor in the genesis of this thesis – is not a major continuing preoccupation of the work, here is not the place to go into great detail about the term of art 'technical rationality' and how it relates to education. However, what I have in mind is such manifestations as the widespread insistence on specifying learning objectives in ways analogous to those of manufactured products, in order that quasi-industrial quality assurance procedures

dissertation is to test the intuition that virtue epistemology has much to say to education generally, there is also the hope that a fuller analysis of knowledge and its acquisition might provide a specific riposte to overconfident educational technicism and reductionist thinking (what we might term ‘village technicism’).⁶ Although we can sympathise with attempts to rescue education from what is perceived as slipshod teaching, it is not clear that the technician’s strategy of keeping a tight rein on outcomes in an attempt to make the process ‘teacher-proof’ will do the trick. Indeed, the reverse looks more likely to be the case: that an inadequate conception of the nature of knowledge will encourage a pedestrian conformity with official lists of approved propositions. Simplistic technical-rational models of knowing, teaching and learning may be shown largely to have missed the point: to have gained apparent objectivity and control, but to have lost sight of the range of ways in which authentic epistemic and pedagogical engagements actually take place; to have replaced genuine learning with a measurable, but often counterfeit, version: *Halbbildung* rather than *Bildung* (to anticipate a later discussion). The countervailing view to be examined in these pages is that virtue epistemology – which pays attention to the well-motivated genesis and the maintenance of concept-webs and not just to their overt demonstration – might be both a more demanding and a more worthy model for teachers to live up to than rivals such as technicism. This is not to say that virtue epistemology is always opposed to particular judgements of village technicism, but more of a claim that virtue epistemology ought to be the final arbiter on questions of knowledge.

An educational development of virtue epistemology shows that both the student’s *processes* of virtue-driven enquiry and the *products* of his cognitive success deserve approbation. If the focus is entirely on outcomes, the strategic learner cannot but chase the rewards by apparently achieving these outcomes in the most efficient way he can. And the ‘apparent’ – that is, ‘from appearances alone’ – is all that village technical rationality demands. The hidden is valueless. Under this dispensation, too much engagement with the process is not in the learner’s interests since the product is all that matters. If learning is seen as a *technē*, then the value resides in the *poiēmata* (products) – the ‘Correct Answers’ – rather than in the productive activity that

may be applied to them. The assumptions of technicist thinking in education enjoy great prestige and endorsement by influential bodies such as the OECD, national governments and the EU.

⁶ After Thomas Uebel’s pejorative label ‘village positivism’, which signifies the naïve stance that an austere conception of the scientific world-view can handle ‘the riddles of life’. Thomas Uebel (1998) ‘Enlightenment and the Vienna Circle’s Scientific World Conception’, Amélie Rorty (ed.) *Philosophers on Education* (London: Routledge) pp.418-419.

generated them. This category mistake can lead to a sort of unhealthy conspiracy between teachers and learners. On another topic, John Kampfner tells us that, ‘In Soviet times, Russians had an expression – we pretend to work; they pretend to pay us’.⁷ The educational conspiracy can be similarly expressed by the learners as, ‘We pretend to learn; you pretend to teach us’. Thus, shallow learning, un-engaged memorisation and, in the worst cases, plagiarism, are all rational responses on the part of the learner to an impoverished construal of knowledge. To counteract this, epistemic virtue ought to be more widely recognised and valorised by education – both as its own reward, in the form of intellectual flourishing, and as a route to genuine knowledge. We ought, I argue, to nurture virtue-conducive intellectual environments in our classrooms and seminar rooms.

The virtue turn in epistemology is an important one, and recent years have seen an increase of interest in the new field, spawning a number of books, web-logs, conferences and peer-reviewed journal articles. Virtue epistemology is beginning to loosen the grip of the sceptic on epistemology, and to free it from the seizing-up that Descartes brought about by his technique of hyperbolic doubt. The Cartesian move led to what may be considered to be somewhat unproductive debates about the fate of knowledge in the face of various sceptical hypotheses, and, latterly, to attempts to find ways of meeting the challenge of Edmund Gettier’s troublesome paper.⁸ For educationalists, this was something of a cul-de-sac, offering little by way of insights for practice, while simultaneously blocking claims to know anything worth teaching. Virtue epistemology, on the other hand, pace the sceptic and Gettier, overcomes this aporia by claiming that it *is* possible for an agent to acquire knowledge, and that this will be through the deliverances of the intellectual virtues. By proposing a more nuanced – but, it might be claimed, also a more exigent and rigorous – construal of knowledge, virtue epistemology seems to be a good candidate for illuminating a more refined vision of teaching and learning than the pervasive model of village technical rationality we have touched on briefly. In a similar way to the process by which virtue *ethics* acted as a corrective to conventional deontic moral education and put the emphasis on ‘the promotion of desirable or admirable character traits’⁹ rather than on

⁷ John Kampfner (2003) *New Statesman*, 1 December. [online] Available at: <http://www.newstatesman.com/200312010017> [Accessed 7 March 2011].

⁸ Edmund Gettier (1963) ‘Is Justified True Belief Knowledge?’, *Analysis*, 23, pp.121-123.

⁹ Jan Stuetel & David Carr (eds.) (1999) ‘Virtue Ethics and the Virtue Approach to Moral Education’, *Virtue Ethics and Moral Education* (London: Routledge), p.4

attending to obligations and eschewing proscribed acts, virtue *epistemology* can also be used to restore the agent and his intellectual dispositions to prominence in general education, as a corrective to undue weight being accorded to lists of prescribed propositions.

Although a number of philosophers have written on virtue epistemology since the field emerged in the late twentieth century – some of whom we shall consider – my two chief protagonists are Ernest Sosa and Linda Zagzebski. They are widely regarded as the most influential contemporary virtue epistemologists and, while they have some things in common, they represent the two main varieties within the field: virtue reliabilism and virtue responsibilism.

Sosa launched the project in his paper, ‘The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge’(1980), and Zagzebski provided an alternative position in her book, *Virtues of the Mind* (1996). Both philosophers have subsequently written articles and edited collections of virtue epistemology, and Sosa has published a number of books on the topic – his most recent being earlier this year (2011). Other writers mainly gather around one of the two flags representing Sosa’s reliabilism or Zagzebski’s responsibilism, or stand apart from the fray and comment on the relative strengths of the two factions.

Zagzebski’s neo-Aristotelian virtue responsibilism might have been expected, with further work, to generate normative principles for education which are congenial to those already sympathetic to existing analyses that stress the role of virtues such as *phronēsis*. In the present thesis, this turns out to be the case. The teacher’s role as an other-regarding epistemic agent is seen to be that of a *phronimos*, animated by a variety of intellectual and moral virtues, the choice of which – in the particular pedagogical situation – draws upon her practical wisdom. My unifying theme of ‘enwebment’ also comes from a development of the virtue responsibilist viewpoint. I show that for educational purposes the traditional epistemological picture of the learner as an autonomous ‘feral knower’ is best replaced by one of a socially-enwebbed epistemic agent, whose knowledge is bound up with that of others via the testimony and the other-regarding virtue of these further agents (particularly the teacher). This web metaphor also obtains at the level of the individual learner, in the shape of W.V.O. Quine’s model of a web of beliefs. I term this a ‘doxastic web’ and consider how it can

be helped into better alignment with external reality, again using some of Zagzebski's key ideas.

Sosa's virtue reliabilism, which comes from an Anglo-American analytic tradition and owes much to the work of Robert Nozick, is rather different from Zagzebski's responsibilism. It has less to say about named epistemic virtues and focuses more directly on the achievement of propositional epistemic targets. Perhaps one can discern an affinity between technical rationality's means-ends thinking and reliabilist virtue epistemology's consequentialism, typified by Sosa's image of an archer successfully hitting a target. But a fuller working out of the implications of reliabilism in the educational realm turns out to pose a challenge to a naïve technicism. The further development that I carry out shows that a simplistic attempt to define learning outcomes narrowly, followed by a straightforward pedagogical campaign to achieve them, will be ineffective in bringing about knowledge-acquisition in the learner. This is connected with the emergent importance of subjunctive conditionals, and hence counterfactual conditionals, in defining what the epistemic targets might be, and it opens up a novel and more demanding way for educators to view propositional knowledge and its acquisition. In making connections between virtue reliabilism and the processes of teaching and learning, Quine's image of a web of beliefs is again developed. In order to conceptualise the process by which individual propositions become incorporated into the learner's web after reliabilist acquisition, a connecting piece of theory is needed. Some concepts from the field of Artificial Intelligence research prove to be helpful in analysing the processes of learning qua belief modification, at a level of generality that fits virtue reliabilism well. The result of this analysis again confirms that focusing too exclusively on individual true propositions is a mistake, and that a hinterland of counterfactive propositions must be also considered in a number of different ways if the learner's web is to contain knowledge organised to a desirable level of coherence.

Virtue epistemology views any putative 'knowledge' acquired by non-virtuous means as non-creditable. Drawing parallels with other acts – an archer firing an arrow, in Sosa's analysis – it sees the value of a successful act (epistemic or otherwise) to reside in its success *because of ability*. Happening to hit an isolated epistemic target through luck or carelessness or with excessive help – that is, acquiring a true belief without employing intellectual virtue – is thus neither as valuable nor as creditable as a success

which *is* due to such ability. So, the notion of desert for virtuous epistemic acts is built into the structure of virtue epistemology, and we can see that this may have significance for education.

I attempt to confine the writing on virtue solely to a consideration of *epistemic* virtue, and thus to quarantine it from any discussion of *moral* virtue.¹⁰ This is a relatively straightforward matter in respect of Sosa's variety of virtue epistemology; but in the case of Zagzebski's work it involves challenging her subsumption of the epistemic under the moral. Whilst I take up this challenge, I also have to concede that the integrity of the border between the intellectual and the moral cannot be fully maintained, so I make a concession in accepting some degree of analytic permeability. Nevertheless, since this is a work of educational epistemology rather than educational ethics, the moral realm is only entered when it cannot be avoided. In this respect, the notion of benevolence is seen to be particularly important, to the extent that it can trump purely epistemic educational desiderata in the interests of the learner's flourishing.

At certain points, we need to make use of formal arguments couched in the symbolism of propositional logic. This follows from one of the two main protagonists, Sosa, using logical notation in advancing his variety of virtue epistemology. The work with artificial intelligence theory also demands some manipulation of symbols.¹¹ So, both symbolic analytical techniques and more nuanced, neo-Aristotelian, methods are brought to bear on certain aspects of education.

Since this is also a work of epistemology, the influence of Plato is strongly recognised too. Because the field owes much to his, and Socrates', seminal thinking, ideas from his dialogues appear throughout the text. In works such as *Meno* and *Theaetetus*, the agenda for epistemology was largely set, and Plato's analysis of the differences between true belief and knowledge is of great significance to the present thesis. Additionally, his importance to the philosophy of education is acknowledged, particularly his notion of 'provocatives' – propositions that challenge the existing beliefs of his interlocutor – which I relate to the aporias caused in the learner when two

¹⁰ I appreciate that words such as 'moral' and 'ethics' are contested terms with various meanings. These nuances will emerge in some later discussion.

¹¹ A full list of the symbols used appears on p.26.

incompatible propositions, p and $\sim p$, are entertained simultaneously. Plato's voice is also heard in the chapter on testimony; in the section on *parrhesia*; when discussing the 'noble lie'; in our consideration of elenchus; in his description of Socrates teaching Meno's slave; in relation to recanting; and in his metaphor of the aviary to represent untethered beliefs.

Because Zagzebski's approach to virtue epistemology is strongly neo-Aristotelian, we shall be drawing directly on Aristotle's writings to inform our discussion. In this regard, his *Nicomachean Ethics* features significantly, particularly Book VI, which deals with the intellectual virtues.

The key theme that emerges from this investigation is that the epistemic virtues are an important conduit to knowledge and that the teacher ought to help the learner – qua epistemic agent – to cultivate both his intellectual virtues and his knowledge.¹² She can achieve this by means of other-regarding actions flowing from her own virtues. Furthermore, some degree of co-ordination between the virtues of the teacher and those of the learner is required for this project to succeed, and such co-ordinating is the work of a *phronimos* engaged in a *praxis*.

In the first half of the thesis (chapters 1, 2, and 3) I explore the new field of virtue epistemology and develop certain aspects of it, and in the second half (chapters 4, 5 and 6) I consider and elaborate a number of implications for education. The six chapters are as follows:

1. Overview of Virtue Epistemology

Beginning with Plato's discussions in *Meno* and *Theaetetus*, I analyse what he sees as the differences between true belief and knowledge proper, and how the latter is well tethered to reality. After considering a number of the difficulties that later arose over Plato's account – due to the emergence of some radical sceptical hypotheses and the 'Gettier problem' – I present a critical exposition of a promising solution that has been developed over the last three decades: virtue epistemology. This is an agent-based

¹² 'Epistemic virtue' and 'knowledge' have more than one meaning within virtue epistemology, however. So, for example, Sosa's 'animal knowledge' can be acquired by the deliverances of eyesight – an epistemic virtue that would not be regarded as such by Zagzebski.

epistemology that places emphasis on particular attributes of the knower rather than on his beliefs per se.

Before describing Ernest Sosa's launching of the new field of virtue epistemology, I consider its origins in Robert Nozick's reliabilist 'tracking' theory of knowledge. I then discuss how Sosa's important epistemic notions of 'safety' and 'sensitivity' derive from Nozick's work, and how these relate to certain properties of subjunctive conditionals. Sosa's proposal that there are two grades of knowledge, and his requirement that even the lesser of these should meet the 'AAA' criteria (that is, be accurate, adroit and apt), are both analysed and evaluated.

In giving an account of Linda Zagzebski's neo-Aristotelian response to Sosa, I show the extent to which she departs from Aristotle's analysis of intellectual virtue. I concur with her departure over the origin of moral and intellectual virtue, but find her project to subsume the intellectual virtues under the moral implausible. In place of the latter, I suggest a eudaimonian approach, which unifies the moral and the intellectual in respect of their role in the overall flourishing of the individual (even though their characteristic aims are different: the good and the true respectively). Zagzebski's construal of the epistemic virtues is richer than Sosa's, however, and this is later useful in developing the educational implications of these virtues.

This exposition and development of virtue epistemology provides a clue to the importance of testimony, and the other-regarding epistemic virtue of others, for the agent's acquisition of knowledge. Neither Sosa nor Zagzebski makes much of these two areas, but their educational significance seems clear, so I explore and develop them fully in the following two chapters.

2. Knowledge and Testimony

The use of testimony is widespread in education – even though the term is not often used in this context – so its theoretical bases need to be understood. Here I consider philosophers with a negative stance towards testimony (Plato, Descartes and Locke) and those with a positive stance (Hume and Coady), and draw a distinction between legal and natural testimony. A discussion concerning the need for us to trust adult testimony during our childhood acquisition of our mother tongue shows the initial importance of testimony for learning. This is followed by a comparison of the

‘reductionists’ and the ‘anti-reductionists’, with the latter being seen to have a more plausible case. Anthony Coady’s claim, that testimony deserves to be on the same footing as perception, memory and reasoning as an epistemic source, is examined and broadly endorsed. I next analyse the auditing of testimony with respect to ‘safety’ and ‘sensitivity’. The notion that knowledge is a communal asset enwebbed by natural and extended testimony is developed, and the traditional epistemic notion of an autonomous agent (the ‘feral knower’) is questioned. The remainder of the chapter is devoted to considering what level of trust in testimony is epistemically-virtuous.

3. Other-Regarding Epistemic Virtues

Starting from a consideration of other-regarding virtue, as virtue ethics understands it, I move on to a specifically virtue-epistemic construal, building on some ideas from Jason Kawall. Acts of other-regarding epistemic virtue should, I argue, be properly motivated, successful and enjoyable. I develop the notion of ‘complementary’ intellectual virtues which ought to animate the teacher and the taught, and take the default gearing of this epistemic dyad to be Thomas Reid’s tallying propensities of ‘veracity and credulity’. During a brief change of perspective, based on Iris Murdoch’s writings, I suggest that ‘the field’ can also play a part somewhat analogous to ‘the other’. Returning to a more usual characterisation of ‘the other’, I establish the importance of the other-regarding moral virtue of ‘benevolence’ in educational settings, by means of some of Michael Slote’s work in virtue ethics. This leads to a discussion of the extent to which the benevolent teacher may virtuously depart from frank testifying. Although veracity ought to be the norm, a place is established for reticence, dissimulation, over-simplification, and the use of myths, for the benefit of the learner. The importance of timeliness in teacher interventions, and the desirability of pursuing certain epistemic aims indirectly, are discussed.

4. Reliabilist Virtue Epistemology and Education

Here I begin to develop the educational implications of virtue epistemology in earnest. I first discuss various understandings of the aims of education and claim that knowledge is always an element of these. Seeking a more rigorous characterisation of ‘knowledge’ than is to be found in some contemporary work in education (particularly that of a technicist hue) I again consider Sosa’s precursor Nozick’s reliabilist ‘tracking’ model and show how each of the four conditions has educational significance. I demonstrate that, while Sosa’s notion of ‘safety’ is relevant to the teacher’s knowledge,

Nozick's 'sensitivity' condition is more pertinent to that of the learners. Since reliabilists (including Sosa) are still bedevilled by the project of attempting to defeat the sceptic, I show how, for educational contexts, we can ignore far-fetched sceptical hypotheses, such as Descartes' *genium malignum*. Using Artificial Intelligence (AI) theory, I then connect reliabilist construals of knowledge to the processes of learning qua virtuous doxastic web-revision. In discussions both of reliabilism and of AI, the counterfactive class of propositions, $\sim p$, turns out to be important, so I provide examples of how this thinking might be deployed in the classroom, and link this to Socrates' use of 'provocatives'. I contrast the safety of the *Feldwege* with the openness of the *Holzwege* in learning situations. Finally, I discuss Sosa's 'AAA' model of knowledge in the light of the reliabilist theory and practical ramifications developed so far.

5. Responsibilist Virtue Epistemology and Education

Next I consider what Zagzebski's *aretaic* approach to virtue epistemology implies for education. We revisit the teacher-taught dyad to see how a virtuous development of this ought to avoid what I term 'the new Athene problem' of an overprotective teacher. In contrasting short-range and long-range aims, I show that an overemphasis on the former can lead to *Halbbildung* (pseudo-edification). Next, I explore some epistemically virtuous ways of dealing with, and causing, aporias in the learner. A discussion of Sarah Wright's virtue contextualism follows. I then conduct an analysis of the various roles that the teacher ought to embody vis-à-vis epistemic virtue. My taxonomy involves viewing her as: (i) a knower; (ii) an other-regarding epistemic agent; (iii) an exemplar of intellectual virtue; and (iv) a mystery-alerter. I show that epistemically virtuous transactions ought to be accompanied by a positive affect. I then consider the important intellectual virtue of open-mindedness. Finally, I develop an account of what the teacher's other-regarding epistemic virtues might be. To show how these ought to be co-ordinated to interlock with the virtues to be cultivated in the learner, I elaborate upon one of the five sets of virtues I have identified as important in educational settings: the 'Social Intellectual Virtues'.

6. Key Implications of Virtue Epistemology for Educational Policy and Practice

During the course of this concluding chapter, I draw the main threads together and discuss some further implications, including a reprise of the key ideas from previous chapters and an identification of their educational importance. I show that the richer

and more demanding construals of knowledge and learning that arise from our development of virtue epistemology can be used to expose some inadequate educational policies and practices. We also see what epistemically-virtuous pedagogies might look like. In the light of virtue epistemology, I suggest how teachers and learners ought to act in order that the educational experience is conducive to intellectual flourishing.

Chapter 1 - Overview of Virtue Epistemology

Introduction

In this chapter, I set the emerging discipline of virtue epistemology in the wider context of general epistemology and describe analytically the work of two major figures in this new field (Ernest Sosa and Linda Zagzebski), as well as their theoretical precursors (Robert Nozick and Aristotle, respectively). Although I later show that a concern for intellectual virtue is highly congruent with the project of teaching and learning, the implications for educational *praxis* will not be analysed in any detail at this stage.

Since epistemology is the branch of philosophy that deals with questions of knowledge, I begin with a brief discussion of knowledge in broad terms, starting with some important ideas from Plato, before moving on to describe and critique virtue epistemology specifically.

Traditional Definitions of Knowledge

Attempts to define knowledge in contemporary epistemology routinely begin with the ‘tripartite definition’ – justified, true belief – a traditional formulation that originates in Socrates’ speculations in *Meno* and *Theaetetus*.¹³ In the *Meno*, Socrates distinguishes between knowledge and mere ‘right opinion’ (*orthē doxa*). The latter he characterises as luckily-acquired (or divinely-inspired) true belief, which has the defect of not being properly anchored by a knowledge of causes and can thus ‘walk off’ like the statues of Dædalus. The former – knowledge – is tethered and so constitutes epistemically-secure

¹³ The author of these dialogues, Plato, did not himself subscribe to the tripartite definition but confined genuine knowledge to the supramundane world of the Forms.

true opinion or *justified* true belief. Similarly, in the *Theaetetus*, Socrates again argues that true belief is not the same as knowledge. In this dialogue, ultimately unsuccessful attempts are made to discover the extra features which convert true opinion into knowledge. The nearest we get to a solution is the claim that knowledge is true opinion ‘with an account’ or *logos*. However, despite the lack of a final and convincing description of the precise nature of knowledge, it is clear that an ‘extra value of knowledge’¹⁴ thesis is being strongly expounded in these dialogues. In the *Meno*, for example, Socrates makes a distinction between someone who knows the way to Larissa – having been there before – and someone who luckily manages to find his way without such knowledge. In terms of outcomes and practical usefulness, the two cases are of equal value (both eventually arrive in Larissa): but one situation is to be regarded as epistemically superior to the other.

Socrates: ... knowledge is more honourable and excellent than true opinion.¹⁵

Socrates strongly asserts that although he does not make many knowledge-claims, this is amongst the select few.

Socrates: ... and yet that knowledge differs from true opinion is no matter of conjecture with me. There are not many things which I profess to know, but this is most certainly one of them.¹⁶

His overall claim is that knowledge is characterised by a stability which is missing from mere true belief, a stability attributable in some way to its tethering to reality via a knowledge of causes. So, as well as the first-order belief, the knower must also possess a number of anchoring beliefs that stabilise it. Moreover, the knower needs to be able to use this tethering to hold on to his knowledge over the long term, and to be able to provide ‘an account’ in order to defend it against objections. Later, I show that the untethered acquisition of a true propositional belief in the educational context provides the epistemic agent with neither the resources to carry out a defence of the proposition in the light of evidence suggesting that the proposition is flawed, nor a principled approach to belief revision should it be seen that the proposition ought to be derogated in favour of another with stronger claims. To be virtuously resistant to elenchus, and to

¹⁴ Some later writers use the acronym ‘EVOK’ – for example, Alvin Goldman & Erik Olsson (forthcoming) ‘Reliabilism and the Value of Knowledge’ in Duncan Pritchard *et al.* (eds.) (Forthcoming) *Epistemic Value* (Oxford: Oxford University Press), p.4 of pre-print.

¹⁵ Plato, *Meno*, 98, 4, Plato: Collected Dialogues (eds. Edith Hamilton & Huntingdon Cairns, 1961) Nineteenth Printing (Princeton: Princeton University Press, 2005). All Plato quotations in the present work derive from this source, unless otherwise indicated.

¹⁶ Plato, *Meno*, 98b, 2.

other hostile epistemic input, knowledge ought to be well-woven into the knower's web of beliefs.

It is worth emphasising here that Socrates believes that there *are* truths and that with careful enough thinking and discussion they can be obtained. The fact that they continually elude him is merely regrettable, not something intrinsic to the nature of knowledge. In the Platonic dialogues, the objections advanced by Socrates during the elenchus usually defeat his interlocutors' knowledge claims, but, significantly, Socrates does not abandon the attempt to uncover the truth, for he lives in hope that the next person he meets in the *agora* might be able to help him attain it.

Moreover, such truths are not to be relativised to the knower, but are true for all epistemic agents, suggesting a 'correspondence' theory rather than the rival 'coherence' or 'consensus' theories of truth.¹⁷ Although Socrates and Plato differ over the nature of reality, neither denies that it exists and can in principle be captured in language. For both Socrates and Plato there are worlds (mundane and supramundane) of which – given a great deal of effort – we can know some truths, and these can be encoded in language which somehow corresponds to, or mirrors, reality. The knower's 'account' is one of correspondence. Recognising that there are significant objections to this simple picture from radical constructivists (such as Ernst Von Glasersfeldt) and postmodernists (such as Richard Rorty¹⁸), to say nothing of W.V.O. Quine and passing over Ludwig Wittgenstein in silence,¹⁹ I shall use the 'proposition:reality' correspondence model of truth in this thesis for two reasons: (i) It is assumed in the work of both of the main virtue epistemologists, Ernest Sosa and Linda Zagzebski, and (ii) it is congenial to the philosophy of education in ways which postmodernist and radical constructivist construals of truth are not. It would take much argument to defend this choice comprehensively, but since adopting either of the rival models would involve the scrupulous intellectually-virtuous teacher prefacing every remark with, "What I am about to say is true for me, but it may not be true for everyone", it can be seen that they are not *prima facie* well-suited to the practice of teaching in its

¹⁷ Felipe Fernández-Armesto (1997) *Truth: A History and a Guide for the Perplexed* (London: Bantam Press), p.217.

¹⁸ Richard Rorty attacks the metaphor of the mind as a mirror of reality in Richard Rorty (1979) *Philosophy and the Mirror of Nature* (Princeton, NJ: Princeton University Press) and proposes an anti-representationalist view in which our thoughts on reality are merely constructed, rather than being linked to things as they are.

¹⁹ I do consider both Quine and Wittgenstein later.

most basic form: testifying. Granted, some propositions are matters of taste and hence inescapably relativised to the believer, but if a teacher offers the statement, say, “There is oil under the North Sea”, the default interpretation by pupils is that, ‘It is true that beneath the real sea-bed of the existing North Sea there is some actual oil’. As long as all parties are in agreement about the referents of the terms ‘oil’, ‘beneath’ and ‘North Sea’, this true proposition is knowable by competent auditors as a result of sincere, well-informed testimony. Furthermore, all parties take it that the North Sea oil has an independent existence that does not rely on their knowing about it.²⁰ On this, Gottlob Frege takes a lead from Hermann Lotze, whose notion of ‘logical objectification’ refers to ‘the common world ... that is the same for and independent of all thinking beings’.²¹ Frege also uses the example of the North Sea to illustrate this:

It does no damage to the objectivity of the North Sea that it depends on our arbitrary choice which part of the general water covering of the earth we want to delimit and call by the name of ‘The North Sea’... [O]ne claims something wholly objective, which is independent from our representations [*Vorstellungen*].²²

The security of tethering of this knowledge is a different matter, however, which I shall discuss later, in the context of a wider analysis of testimonially-derived true beliefs.

The history of epistemology since Plato has been largely one of attempts to analyse the features of true beliefs which endow them with the extra value of being knowledge. Whether the justifying conditions need to be cognitively available to the holder of true beliefs (a requirement Socrates not only articulates in the phrase ‘with an account’, but also puts to the test by a robust elenchus in the dialogues), or it is enough that this tethering simply exists, unbeknownst to the believer, is the issue which separates internalists from externalists. Debates between these two groups appeared until recently to have had no prospect of resolution, and due to this and to the identification of a number of other seemingly insoluble problems (such as the conflict between foundationalism and coherentism), a new epistemological approach, premised on the notion of epistemic virtue, has emerged over the last three decades. Before outlining

²⁰ In a recent book, Paul Boghossian sneers at Bruno Latour’s (1998) paper ‘*Ramses II est-il mort de la tuberculose?*’ *La Recherche*, 307, pp.84-85. Latour doubts the findings of French scientists that Ramses II had died circa 1213 BCE, for, ‘How could he pass away due to a bacillus discovered by Robert Koch in 1882?’ Latour’s constructivist claim is that, ‘Before Koch, the bacillus had no real existence.’ Paul Boghossian (2006) *Fear of Knowledge: against relativism and constructivism* (Oxford: Oxford University Press), p.26.

²¹ The Herman Lotze (1843) quotation is from: Lorraine Daston & Peter Galison (2007) *Objectivity* (New York: Zone Books), p.266.

²² Gottlob Frege (1884). Quoted in: Daston & Galison (2007) *ibid.*, p.267.

these problems and pointing the way to promising solutions emerging from virtue epistemology, I shall first set out a group of symbols with which to standardise the expression of some of these various viewpoints.

Symbolic Conventions and Abbreviations

Writers in this new field, as well as their precursors, use a variety of symbolic representations for verbal definitions and logical arguments. On occasion, they even show inconsistency within the same published paper.²³ So, to avoid any muddle over this, the following conventions will be adopted in this thesis:

p	Proposition
s	Subject (Epistemic agent)
K	Knows
B	Believes
J	Is justified
G	Gettier-proofing condition
C	Corpus of beliefs
F	Field of knowledge
h	Sceptical hypothesis
\sim	NOT
\cdot	AND
$+$	OR ²⁴
\in	Is an element of
\forall	Universal quantification [For all ...]
\rightarrow	Material conditional [If ... then ...]
\leftrightarrow	Biconditional [If and only if, iff, just in case ... then...]
$\square\rightarrow$	Subjunctive conditional [Were it to be the case that ... then it would be the case that...]

Given that many of the key researchers in this area are American, I keep quotations from these in the original US English. The few Irish words that appear are not

²³ For example, in various papers, Sosa uses both ' \supset ' and ' \rightarrow ' to signify material implication, and the latter, rather confusingly, also for implication under the subjunctive conditional. Since an important part of Sosa's virtue-epistemic theory relies on certain properties of subjunctive conditionals in contrast to material conditionals, this confusion is to be avoided.

²⁴ I also use a similar symbol ' \oplus ' for 'belief-expansion', but the context will make this clear. Some further symbols associated with belief revision will be introduced as needed.

italicised, unlike those of Latin, Greek, French and German origin. Expressions and words that have become naturalised (such as maieutic, prima facie, pro tanto, qua and vignette) are generally not shown in italics.²⁵

I follow the founder of the field, Ernest Sosa, in using the masculine pronoun ‘he’ when referring to the knower. In addition, I call the teacher ‘she’.²⁶

Some Problems of Traditional Epistemology

The tripartite definition of knowledge, which is the starting point of much contemporary epistemology, is, as we have seen, ‘justified true belief’ (JTB). The word ‘belief’ in this formulation is taken to refer to assent by the putative knower to a proposition *p*, and is conventionally regarded as being stronger than mere ungrounded opinion but weaker than knowledge. To upgrade a true belief into the knowledge class, a justification must exist, which may or may not be internally accessible to the knower: internalism requires this accessibility, while externalism allows it not to be available to him.

Under the tripartite definition, the three conditions, individually necessary and jointly sufficient, for subject *s* having knowledge of a true proposition *p* are as follows:

1. *p*
2. *s* believes that *p*
3. *s* is justified in believing that *p*

²⁵ These are all in *The Concise Oxford English Dictionary*, Revised Eleventh Edition, 2009. I retain the italics for *praxis*, despite it being in the *COED*, to indicate a specifically Greek sense of the word.

²⁶ Most later writers in this field use ‘she’ for the knower, however. The attraction of the latter is clear. This usage avoids clumsy ‘s/he’ or ungrammatical ‘they’ constructions and also alludes to traditional portrayals of virtue as female (such as the painting by Tiepolo, *The Triumph of Virtue and Nobility Over Ignorance*, which adorns the cover of Zagzebski’s *Virtues of the Mind*). I shall use ‘he’ for the knower, because (i) historically, putative knowers in the dialogues of one who first raised many of the important epistemological issues – Plato – are all male (Meno’s slave boy, Theætetus *et al.*) and (ii) since the present work is in the philosophy of education, it is convenient to have a way of differentiating between the learner qua would-be knower and the teacher qua other-regarding ethical and epistemic agent. Given that the gender profile of the profession across Europe is becoming increasingly feminised (Wylie, 2000) calling the teacher ‘she’ and the learner ‘he’ enables a clear distinction to be made (without implying, of course, that males cannot be teachers, nor females learners). Cathy Wylie (2000) *Trends in the feminization of the teaching profession in OECD countries 1980-1995* (Wellington: New Zealand Council for Educational Research).

Condition (3) is arguably the most interesting epistemologically, and the various schools of epistemology treat the notion of justification in different ways. For example, internalists, as we have already seen, require *s* to have access to the justifying knowledge while externalists do not. However, the starting point for all camps is the assertion that *s* has knowledge ‘that *p*’ if and only if *p* is true, *s* believes that *p*, and *s*’s belief in proposition *p* is in some way justified. Using the list of symbols defined above, we can re-write this as follows:

$$K_s p \leftrightarrow p \cdot B_s p \cdot JB_s p$$

Two traditions pose a threat to this, or, indeed, to any conception of knowledge. The first, in which Descartes is a prominent figure, involves proposing a radical sceptical hypothesis – the existence of a *genium malignum*,²⁷ or others’, more recent, *Matrix*²⁸ or ‘Brain in a Vat’²⁹ scenarios – which undermines claims to knowledge. The arguments for this first tradition, in outline, begin from the premiss that having *certain* knowledge of proposition *p* requires that *s* knows sceptical hypothesis *h* to be false. Since *s* cannot know that *h* is false, because *s* may be subject to *h* (the trickery of the *genium malignum*, for example), without being aware of it, *s* cannot be certain of *p*. Again, this can be transliterated into the symbolic conventions defined a moment ago, to enable propositional logic to provide a handrail through the argument:

$$\begin{array}{l} K_s p \rightarrow K_s [\sim h] \\ \sim K_s [\sim h] \\ \dots\dots\dots \\ \sim K_s p \qquad \text{MT} \end{array}$$

By *modus tollens*, we see that because *s* does not know that *h* is false, it is not the case that ‘*s* knows *p*’.³⁰ Showing that this conclusion need not necessarily be true, and that, on the contrary, knowledge *is* possible, forms the basis of the epistemological tradition of attempting to defeat the sceptic.

²⁷ Descartes (1641) *Meditations on First Philosophy* [tr. Desmond Clarke] in *Meditations and Other Metaphysical Writings* (London: Penguin Classics, 2000). He first discusses the possibility of an ‘evil spirit [who] entraps [his] credulity’ near the end of Meditation I, p.22.

²⁸ A 1989 film by directors Andy and Lana Wachowski.

²⁹ Hilary Putnam introduces this notion in his (1982) *Reason, Truth and History* (Cambridge: Cambridge University Press), pp.1-21.

³⁰ *Modus Tollens* or *Modus Tollendo Tollens* means literally ‘the method that denies by denying’, is sometimes called ‘denying the consequent’, and is a logically valid move. For example, if being a bishop implies having a mitre, then not having a mitre means that one is not a bishop.

A second tradition follows from the work of Edmund Gettier, who famously shows that knowledge is not simply justified true belief.³¹ He achieves this by describing some vignettes in which the protagonist ‘Smith’ asserts what turn out to be justified true beliefs – thus apparently meeting the criteria for knowledge – but which had in fact been based on faulty evidence. The first of these scenarios involves the logical conjunction of a true and a false belief about the results of a job interview (that the successful candidate will have ten coins in his pocket AND that Jones will get the job) to arrive at an apparently justified true belief (that the successful candidate will have ten coins in his pocket). This cannot be regarded as knowledge, however. Smith himself is appointed to the post, but the fact that he also has ten coins is mere epistemic luck, derived from an observation of Jones’s pocket-contents and not his own. So Smith has a justified true belief that *p*, but not, Gettier argues, a *knowledge* that *p*. Thus, justified true belief and knowledge are shown to be not the same thing. Despite their apparent triviality, Gettier counter-examples such as this have proved surprisingly difficult to defuse, and they have set off a philosophical cottage industry which attempts to achieve this by proposing ‘Gettier-proof’ definitions of knowledge. A construal of knowledge is sought along the lines of (JTB).G, where G is a Gettier-proofing requirement.

Underlying both of the projects outlined above – defeating the sceptic and Gettier-proofing knowledge-claims – is the intuition that knowledge is something we should care about. It is seen as being important enough to make the effort of neutralising both the sceptic and Gettier be regarded as worthwhile. In common with Socrates, as educators we feel that knowledge has an extra value, over and above that of mere true belief, which we ought to prize. This feature of knowledge is something for which virtue epistemology might be reasonably expected to account, given (in at least some of its manifestations) its connections with virtue ethics – a domain in which questions of value are central. There is an explicit axiological dimension to virtue epistemology – particularly that part of the field aligned with Zagzebski’s neo-Aristotelian version – which I feel maps well onto educational ascriptions of value to knowledge. Together with an orientation towards the other great transcendentals of the good and the beautiful, a pursuit of knowledge has value because it is crucial to human well-being. I claim that learners *can* flourish when they *strive* to attain worthwhile cognitive contact with reality, and that they *do* flourish when they *do* attain it on a given occasion.

³¹ Edmund Gettier (1963) ‘Is Justified True Belief Knowledge?’ *Analysis*, 23, pp.121-123.

Both camps of traditional epistemology – internalists and externalists – concern themselves primarily with beliefs. A knower has good beliefs: beliefs which are not only true but are also adequately justified. In this respect, traditional epistemology is analogous to act-based ethics. In the latter, certain acts are regarded as being good, and our evaluation of a person thus flows only derivatively from an analysis of the acts she performs. Analogously, traditional epistemology focuses on beliefs and relegates believers to the background, since they are replaceable as bearers of such beliefs.

Changing from a Belief-based to an Agent-based Epistemology

Virtue epistemology, as an agent-based³² epistemology, reverses the direction of analysis that is characteristic of belief-based epistemologies. Knowledge is now to be seen as true belief arising in a cognitive agent out of acts of cognitive virtue, not true belief to which an idealised knower would have a duty to assent because of particular properties of the belief itself. So, the focus shifts from the attributes of a performance (attributes notably valued by positivism, behaviourism and technicism, as well as act-based ethics) to the dispositions and qualities of the performer.

Ernest Sosa's (1980) paper, 'The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge',³³ is widely credited with inaugurating the field of contemporary virtue epistemology. Despite agreement on the main principles (such as the direction of analysis just described) there has, unsurprisingly, been a gradual divergence of view amongst self-described virtue-epistemologists. According to Guy Axtell³⁴, one group (typified by Sosa himself, John Greco and Alvin Goldman) has its home in 'virtue *reliabilism*', while another (containing Linda Zagzebski, James Montmarquet and Lorraine Code) finds neo-Aristotelian 'virtue *responsibilism*' more congenial. Axtell plays down these differences, however, and denies that this labelling implies a re-run of the extremes of the externalism/internalism debates of recent epistemology. Before moving on to the details of the new field of virtue epistemology,

³² This tends to be the term used to define the virtue approach, but perhaps 'agent-focused' might be more appropriate, since truth-conduciveness is also used as a criterion for virtuous epistemic activity.

³³ Ernest Sosa (1980) 'The Raft and the Pyramid' *Midwest Studies in Philosophy* vol.5, pp.3-25 Reprinted in Sosa *et al.* (eds.) (2008) *Epistemology: An Anthology* [2nd Edition] (Oxford: Blackwell Publishing Ltd.) pp.145-164.

³⁴ Guy Axtell (2001) quoted in Robert Lockie (2008) 'Problems for virtue theories in epistemology' *Philos. Stud.*, 138, pp.169-191.

I shall describe one model of knowledge which preceded Sosa's reliabilist version.³⁵

A Precursor to Ernest Sosa's Epistemology: Robert Nozick's 'Tracking' Model

The reliabilist 'tracking' model of Robert Nozick is particularly interesting, since it goes some way towards defeating both the sceptic and Gettier, as well as re-appearing in Ernest Sosa's virtue epistemology in the shape of discussions about what he labels 'safety' and 'sensitivity'. The essential feature of Nozick's construal of knowledge is the requirement that the knower's beliefs should *track* the truth. Not only must *s* believe *p*, but *s* would also still believe *p* if circumstances were different, yet *p* were still to be a true proposition. We might state this in the form: 's would believe (true proposition) *p*, come what may'. Conversely, were *p* not to be the case, *s* would not believe that *p*, despite any changes in circumstances.

Nozick starts from the first two standard JTB conditions, derived from Plato, which we discussed earlier (p.27):

1. *p* is true
2. *s* believes that *p*

He then proposes two further conditions that are individually necessary, and jointly sufficient for knowledge when combined with (1) and (2):

- (3) If *p* weren't true, S wouldn't believe that *p*.³⁶
- (4) $p \rightarrow$ S believes that *p*.³⁷

Since we will later compare Nozick with Sosa, it is desirable to express their arguments in a consistent notation. So, using the symbol 'box-arrow' ($\Box \rightarrow$) to represent the subjunctive conditional ('were it to be the case that ... then it would be the case that...'), we re-write Nozick's four 'tracking' conditions for knowledge as:

³⁵ With one exception, Sosa either refers explicitly to Nozick's model, or uses the Nozick-derived concepts of 'safety' and 'sensitivity', in all of the books and articles cited here, as well as in several other published works. Although his 1980 (op. cit.) paper makes no mention of Nozick's thinking (for chronological reasons), we can detect a strong influence of Nozick's tracking reliabilism in Sosa's subsequent development of his reliabilist virtue epistemology.

³⁶ Robert Nozick (1981) *Philosophical Explanations* (Oxford: Oxford University Press), p.172.

³⁷ Nozick intends the subjunctive conditional here, not the material implication that his arrow might be taken to indicate. *ibid.* p.176.

1. p
2. $B_s p$
3. $\sim p \square \rightarrow \sim B_s p$
4. $p \square \rightarrow B_s p$

Condition (3) (which Sosa exclusively terms ‘sensitivity’³⁸) describes the knower’s response to the counterfactual case of p not being true. Condition (4) can be explicated as: ‘Were it to be the case that p is true, then s would believe p ’. So, to have knowledge of true proposition p , s must believe p to be true, irrespective of other features of the epistemic situation AND be in a position such that p would not be believed by s were it not to be true.

We can now take Nozick’s model and put it to the test by applying it to the Gettier scenario, which I outlined above, to check if it can identify non-knowledge. Doing so successfully reveals that ‘Smith’ fails to have knowledge, because his belief meets neither condition (3) nor condition (4). The number of coins in one’s pocket is not usually a reliable predictor of interview success,³⁹ so Smith’s ‘knowledge’ falls down on condition (3), which stipulates that were p not to be the case then s would not believe it. Placing his faith on a coin-count, Smith would still believe p , which might easily turn out to be false: the successful candidate could just as well have nine or eleven or no coins in his pocket (in close possible worlds) and this would have had no bearing on the interview outcome. Similar reasoning rules out Smith’s belief as ‘knowledge’, if we use Nozick’s tracking condition (4).

One interesting feature of Nozick’s model is that although s ’s beliefs must track the truth of the proposition p if they are to be considered as knowledge, they need not necessarily be *caused* by p . The tracking model is compatible with a causative model but does not have to imply it, for I suggest that causation can in this context be considered as a special case or subset of conditional tracking. Nevertheless, simply requiring beliefs to track the truth in this way, without specifying the tracking mechanism, does not seem to me to be a satisfactory solution to the problem of defining knowledge. It also lacks an explanation of why knowledge is of more *value*

³⁸ Nozick himself uses the term ‘sensitivity’, but in a much looser way than Sosa, who restricts it to counterfactual sensitivity [that is, Nozick’s condition (3)]. Nozick labels (3) the ‘variation’ condition and (4) the ‘adherence’ condition. (Nozick (1981) op. cit., p.211).

³⁹ Leaving aside the possibilities for bribery.

than true belief. An elaboration of these points is to be found in the new field of virtue epistemology. Sosa, for example, suggests that the value arises from apt epistemic performance,⁴⁰ and Zagzebski locates it in the character of the agent.⁴¹ Both see epistemic virtue as the tracking mechanism: Sosa's construal being that which enables the hitting of epistemic targets, and Zagzebski's being that which enables cognitive contact with reality.

Virtue Epistemology (i) – Ernest Sosa

A causative model of knowledge invites an analysis which examines beliefs and investigates their causes. The tracking model of Nozick can be approached in this same way (for, as we have seen, causation can be regarded as a subset of tracking), or attention can be switched to the agent, the attributes of whom are what arguably give rise to a tracking between the world and his beliefs. This, as we saw earlier, is the overall approach of virtue epistemology: it starts from the properties of a cognitive agent rather than from the depersonalised beliefs which form the basis of traditional epistemology. In other words, justification supervenes on attributes of *persons* (that is, their intellectual virtues), rather than on aspects of the *beliefs* which are thus acquired: a reversal of the traditional attribution of justification. However, virtue epistemology is only agent-focused not exclusively agent-based, for the beliefs must be true to count as knowledge.

Both of the images implied by the title of Sosa's seminal paper, 'The Raft and the Pyramid', relate to possible structures of knowledge located in the mind of an individual knower. The 'raft' we recognise as Otto Neurath's metaphor, depicting a coherentist view of knowledge, and the 'pyramid' alludes to a foundationalist model of knowledge. The overall thesis of Sosa's paper is that both coherentism and foundationalism (that is, the raft and the pyramid) are faulty in a number of respects and that a particular type of reliabilism – one founded on the intellectual virtues – is a better alternative.

Sosa's notion of an 'epistemic pyramid' is intended to capture the ascription of an architectonic structure to knowledge by early modern epistemologists: René Descartes

⁴⁰ Ernest Sosa (2011) *Knowing Full Well* (Princeton: Princeton University Press), p.8.

⁴¹ Linda Zagzebski's (1996) *Virtues of the Mind* (Cambridge: Cambridge University Press), p.16.

and David Hume in particular. The essence of this foundationalist model is that there exist asymmetrical relationships between nodes of propositional knowledge, such that each depends on more fundamental nodes (without these more fundamental nodes being in any way co-dependent on the nodes they support). All branches of the epistemic pyramid terminate downwards in more basic beliefs, the upper nodes being derived inferentially from the lower ones. For Descartes, the foundations must be indubitable. This requirement poses serious problems for foundationalism, in that the type of absolutely certain knowledge, which is robust enough to support the weight of the inferential structure built upon it, seems not to be available. If the arguments of Descartes are accepted – but not necessarily his *deus ex machina* of a non-deceiving God who provides a warrant for belief in clear and distinct truths – then we are plunged into a deep scepticism in which very little of our putative everyday ‘knowledge’ will survive. As a self-described ‘particularist’, Sosa wants to hold on to such knowledge and he thus rejects the methodological foundationalism of Hume and Descartes.⁴²

What we might call the ‘epistemic raft’, on the other hand, does not anchor itself to error-free foundations but floats freely, in the form of a number of planks of knowledge tied together in co-dependent ways. No plank is immune from being removed and jettisoned (if we elaborate on Neurath’s metaphor), but the ‘knower’ must stand on one plank to repair or replace another. What gives the raft its strength are the linkages between the planks, or, in terms of knowledge, the coherence between the beliefs held by the knower. The notorious weakness of this model is that it can easily become untethered from reality and drift away, for a number of different but equally-coherent sets of beliefs may be consistent with the same world. (Or, alternatively, one particular set of coherent beliefs could be left intact even if the world were to take on a number of possible different forms.) Because of the inability of coherentism to adjudicate between similarly-coherent sets of beliefs, it too must be rejected, proposes Sosa.

He articulates further arguments which cast doubt on the prospects of either foundationalism or coherentism to provide viable explanations of knowledge. One line

⁴² ‘A *particularist* epistemology takes it that our first awareness is to facts which are restricted to the particular case before us.’ Jonathan Dancy & Ernest Sosa (eds.) (1993) *A Companion to Epistemology* (Oxford: Blackwell Publishing), p.287. General principles follow later. So, for Sosa, the price of accepting everyday knowledge is to reject foundationalism and its desire for indubitability. This overcomes the difficulty in identifying candidates to act as load-bearing fundamental propositions.

of attack on both types of account is his ‘doxastic ascent’ argument, which leads to an unacceptable infinite regress in each case. The foundationalist version is as follows:

A. A belief B is foundationally justified for S in virtue of having property F only if S is justified in believing (1) that most at least of his beliefs with property F are true, and (2) that B has property F.⁴³

It is condition (1) which triggers the regress, for a first-order belief based on sensory experience (perhaps a ‘clear and distinct’ Cartesian event, we might suggest) requires the further belief that beliefs with the property F (of being based on sensory experience) are generally true. This second-order belief, in turn, needs supporting reasons, and so the regress is launched. Coherentism is vulnerable to attack on similar lines, but with condition (1) modified by Sosa to A’: ‘that most at least of his beliefs with the property F of thus cohering are true’.⁴⁴

Having undermined traditional foundationalism and shown incoherences in its historical alternative, Sosa still wants to hold on to the particularist notion that non-inferential knowledge is possible. Descartes, as we saw earlier, introduced God into the frame to further the dialectic, but Sosa’s *deus ex machina* is an alien. An argument is constructed, appealing to non-chauvinist principles we might say, which leads to the conclusion that there is a deeper level at which belief-acquisition can be analysed for all sensory modalities and for both humans and extra-terrestrials. As well as our familiar human use of eyesight, hearing and so on, a more general account of the foundations for knowledge would need to allow for the possibility of exotic alien belief-acquisition involving ‘... fields of force, waves, mathematical structures and numerical assignments to variables in several dimensions[.]’⁴⁵ There is thus a need to find a unifying ground that can support the specifics of a variety of epistemic mechanisms.

At this point, in a short section at the end of a substantial paper, Sosa proposes his solution: intellectual virtue. Primary justification ‘... would apply to intellectual virtues, to stable dispositions for belief acquisition, through their greater contribution

⁴³ Sosa (1980) *op. cit.*, p.155.

⁴⁴ *ibid.*, p.155.

⁴⁵ *ibid.*, p.159.

toward getting us to the truth'.⁴⁶ Particular beliefs would then receive secondary justification, because of their origins in intellectual virtue.

After providing this account of such high conceptual generality that it would apply to any life-form capable of knowledge, Sosa focuses on the implications for Homo sapiens, a species characterised, he suggests, by sociability and language-use. We need, he feels, to '... give due weight not only to the subject and his intrinsic nature but also to his environment and to his epistemic community'.⁴⁷ To be 'knowledgeable' is to be a reliable source of information, an honorific word conveying the importance of such reliability to social beings like ourselves. I shall develop this clue of Sosa's – which he leaves largely undeveloped in his subsequent writings⁴⁸ – in later chapters on 'Testimony' and 'Other-Regarding Epistemic Virtue', recognising the importance of the social aspects of epistemology, particularly in educational contexts.

Since 'The Raft and the Pyramid' is generally acknowledged to be the beginning of contemporary virtue epistemology, it is worth pausing for breath at this point in order to consider some of the ways in which this paper sets the agenda for subsequent work in the field.

Sosa's Agenda

Sosa's notion of virtue is very different from Aristotle's and is somewhat devoid of content. This thinness is perhaps an unavoidable consequence of the high level of abstraction and generality he seeks. 'Intellectual virtue' is to Sosa simply a placeholder for the set of stable dispositions and faculties which allow potential knowers to track the truth. Whatever form they take, in whatever terrestrial or alien species, these properties are truth-conducive (and by implication survival-conducive): so this is, broadly speaking, a consequentialist model. Sosa vacillates in this respect, however, and gives the rather curious example of the ethical behaviour of 'Frau Hitler's' obstetrician. Because the doctor, with his 'cognitive limitations' could not have

⁴⁶ *ibid.*, p.159.

⁴⁷ *ibid.*, p.160.

⁴⁸ Sosa's very latest book on virtue epistemology touches on testimony a little more. He comes to the same conclusion I had already reached independently of him in my Chapter 2: 'Human testimony stands with the senses in providing default rational justification'. Ernest Sosa (2011) *Knowing Full Well* (Princeton: Princeton University Press) p. 138.

foreseen the undesirable consequences of the safe delivery of ‘little Adolf’,⁴⁹ he acted on the basis of stable dispositions to do good and hence did not commit infanticide. The fact that this was subsequently disastrous in terms of the overall good in the world, did not negate the obstetrician’s virtuous action. This could be considered a deontic approach to virtuous action, in that the obstetrician did his Hippocratic duty. The tension between deontic and consequentialist tendencies, which Sosa highlights through this vignette, continues to provoke debate in virtue epistemology. Overall, Sosa finds his home in what can roughly be considered as a species of epistemic consequentialism, while others (such as Linda Zagzebski) find epistemic deontology more congenial – all within the broad church of virtue epistemology. These differences largely hinge on whether truth-conduciveness or well-motivated intellectual action is seen as the hallmark of epistemic virtue⁵⁰ – the former being approximately aligned with consequentialism and the latter with deontology. Virtue epistemology avoids the two undesirable alternatives of consequentialism and deontology, but it still bears their traces to some extent.

Safety and Sensitivity

Because Sosa is in the virtue *reliabilist* camp, his construal of knowledge owes much to Nozick – whose model, as we have seen, treats knowledge as true beliefs that *reliably* track the truth. Some consider Nozick to have been a virtue epistemologist before his time⁵¹ and Sosa’s approach is distinctively Nozickian in its use of subjunctive conditionals to define knowledge. A key feature of Sosa’s reliabilism, is his distinction between ‘sensitivity’ and ‘safety’ – two conditions that have their origin (although not their labels) in conditions (3) and (4) of Nozick’s tracking model. Whilst Nozick puts the emphasis on sensitivity, Sosa favours safety as a condition for knowledge.

1. p
2. $B_s p$
3. $\sim p \square \rightarrow \sim B_s p$
4. $p \square \rightarrow B_s p$

⁴⁹ Sosa (1980) op. cit., p.148.

⁵⁰ This division into consequentialists or deontologists broadly mirrors Axtell’s grouping of epistemologists into reliabilists or responsibilists.

⁵¹ Jonathan L. Kvanvig (1992) *The intellectual virtues and the life of the mind: on the place of the virtues in epistemology*, (Lanham: Rowman & Littlefield Publishers, inc.), p.23

Sosa claims that these two requirements for knowledge [let us call them (3) and (4a), for reasons that will become apparent⁵²] are often confused, but his methods of showing this sometimes add to the confusion. Since the sensitivity/safety distinction is a key part of the development of Sosa’s virtue epistemology, this needs explaining more perspicuously, requiring some logical arguments expressed in symbolic notation. Were subjunctive conditionals to contrapose validly, pace Sosa, then conditions (3) and (4a) would collapse in such a way that Sosa’s important distinction would be lost.

First of all, let us see how Sosa’s notion of ‘sensitivity’ relates to Nozickian tracking (N) and how Sosa’s modification – Cartesian tracking⁵³ (C) – defines ‘safety’.

Consider again the tracking requirement proposed in my paper.

(C) S would believe P iff P were the case

And compare that with:

(N) If P were the case, S would believe P; and
If P were false, S would not believe P.⁵⁴

He has muddied the water a little here by presenting Nozick (3) and (4) in reverse order, and it is not obvious how his condition (C) follows from Nozick’s two tracking conditions. In order to make sense of his moves, we can encode it into the symbols set out earlier (p.26).

It seems that Sosa has taken Nozick (3), $\sim p \Box \rightarrow \sim B_s p$, and counterposed it to produce (3a) $B_s p \Box \rightarrow p$.

He then takes Nozick (4), $p \Box \rightarrow B_s p$, and similarly counterposes it to yield (4a), $\sim B_s p \Box \rightarrow \sim p$,

By combining these newly-generated conditionals, he arrives at his biconditional Cartesian tracking requirement (C):

$B_s p \leftarrow \Box \rightarrow p$, ‘S would believe P iff P were the case’.

⁵² This labelling is needed to follow what Sosa has done, even though he himself does not use it.

⁵³ He perhaps dubs it ‘Cartesian’ tracking because, to Descartes, a clear and distinct impression would enable *s* to believe *p* only if it were the case, being underwritten by a non-deceiving God. However, Sosa intends a naturalised epistemology (rather than Descartes’ supernaturalised version)

⁵⁴ Ernest Sosa ‘(1996) ‘Postscript to “Proper Functionalism and Virtue Epistemology”’, Chapter 14 of Jonathan L. Kvanvig (ed.) (1996) *Warrant in Contemporary Epistemology: Essays in Honor of Plantinga’s Theory* (Lanham: Rowman & Littlefield Publishers, Inc.), p.274

Since this derives from Nozick's work, let us give Sosa's 'safety' the alternate label 'Nozick (5)':

$$(5) B_s p \leftarrow \square \rightarrow p$$

'Safety' [or Nozick (5)] thus obtains of proposition p , if and only if were s to believe p , then p would be true.

But, Sosa's argument depends on the principle that subjunctive conditionals do not validly counterpose. If this were a permissible move, then we could simply collapse his variants on Nozick's conditions for knowledge back to the Nozick originals, and his 'safety' requirement for knowledge would hence disappear. Unfortunately, his ways of justifying this claimed property of subjunctive conditionals are not clear. For example, part of a recent illustration is as follows:

If water now flowed from your kitchen faucet [water-tap], for example, it would then be false that water so flowed while your main house valve [stop-cock] was closed. But the contrapositive of this true conditional is false.⁵⁵

Moreover, in an earlier version of this plumbing analogy,⁵⁶ Sosa uses propositional logic notation instead of words, but he employs the symbol for material conditionals (\rightarrow) which *do* contrapose (despite his argument) rather than the symbol for subjunctive conditionals ($\square \rightarrow$) which do not. Because I later rely on notions such as 'sensitivity' [Nozick (3)] and 'safety' [Sosa/Nozick (5)], I offer a clearer way of demonstrating the point than those given by Sosa.

The most straightforward way for us to show this non-contraposability of subjunctive conditionals is to demonstrate that, whilst material conditionals obey the rule of 'denying the consequent', or *modus tollens*, subjunctive conditionals do not.

⁵⁵ Ernest Sosa (2007) *A Virtue Epistemology: Apt Belief and Reflective Knowledge* (Oxford: Oxford University Press), p.25. (UK/Irish-English equivalents added for clarity).

⁵⁶ Ernest Sosa (1999) 'How to Defeat Opposition to Moore' *Philosophical Perspectives*, 13, *Epistemology*, p.150

Modus tollens for material conditionals takes the perfectly valid form exemplified below:

1. If s is a politician, s is mendacious
2. s is not mendacious
-
3. s is not a politician MT

1. $p \rightarrow q$
2. $\sim q$
-
3. $\sim p$ MT

Modus tollens does not validly apply to subjunctive conditionals, however, as Ernest Adams⁵⁷ points out and illustrates with the following example [Line numbers replacing his original letters A and B]:

1. If it rained, it didn't rain hard
2. It rained hard
-
3. So it didn't rain.

Perhaps to bring out the point more clearly vis-à-vis subjunctive conditionals, the wording would be better as: 'Were it to rain, it would not rain hard'.

We can then rewrite Adams' example in propositional logic notation:

1. $r \square \rightarrow \sim r_{\text{hard}}$
2. r_{hard}
-
3. $\sim r$ MT (INVALID)

Because the conclusion is false, either the form of the reasoning must be invalid, or one or more of the premises must be false. Arguments can be made either way, but at least this shows *prima facie*, if not *ultima facie*, that there is something suspect about using *modus tollens* with subjunctive conditionals. For instance, if we apply *modus tollens* to Sosa's 'faucet' subjunctive conditional example, the outcome is: 'If water flowed from

⁵⁷ Ernest W Adams (1988) 'Modus Tollens Revisited', *Analysis*, vol.48, no.3, p.122.

your kitchen faucet [water-tap], and the main house valve [stop-cock] was not open, then water would not flow from your kitchen faucet’ – clearly a faulty conclusion.

A third way of looking at this feature of subjunctive conditionals is to compare one of their logical properties with that of indicative conditionals. Take two closely-related conditionals with different grammatical moods, one indicative and one subjunctive:

C1: If Oswald didn’t shoot Kennedy, someone else did

C2: If Oswald hadn’t shot Kennedy, someone else would have

C2 is untrue, however (if we adopt the ‘lone-gunman hypothesis’) so we replace it with:

C3: If Oswald hadn’t shot Kennedy, someone else would not have

If we counterpose the first sentence, C1, we arrive at the true conditional: ‘If someone else didn’t shoot Kennedy, then Oswald did’. But if we attempt this with the corrected second sentence, C3, we produce the false conditional: ‘Had someone else shot Kennedy, then Oswald would have’. We shall pursue this no further, having shown that Sosa acts reasonably in refusing to collapse safety and sensitivity together, since subjunctive conditionals do not validly counterpose in any of our three examples.

In Sosa’s more recent works, the notions of safety and sensitivity become less prominent. He weakens his definition of ‘safety’ to include the possibility of error and give an expression of relative confidence: ‘A belief that p is safe provided it would have been held only if (most likely) p’.⁵⁸ This is a welcome reduction in certainty and a recognition that certain scenarios are so far out in possibility space as to be unlikely and hence can safely be disregarded. All that we need for a belief to be safe ‘... is that *not easily* would it fail by being false or untrue.’ Later in the same work, however, Sosa dispenses with the ‘safety’ requirement altogether:

Knowledge is simply ... apt performance in the way of belief. Knowledge hence does not require the safety of the contained belief, since the belief can be unsafe owing to the fragility of the believer’s competence or situation.⁵⁹

⁵⁸ Sosa (2007) op. cit., p.25.

⁵⁹ Sosa (2007) op. cit., p.41.

In his latest book on virtue epistemology,⁶⁰ the term ‘sensitivity’ does not even appear in the index. However, I feel that Sosa goes too far in jettisoning these valuable notions in order to simplify his ‘AAA’ structure.⁶¹ ‘Sensitivity’ and ‘safety’ can be used to analyse how knowledge tracks the truth, both counterfactually and pro-factually: so I retain them for the purposes of educational virtue epistemology in the shape of Nozick’s tracking requirement (3) and Sosa’s variant (3a) respectively.

We shall return to the topic of counterfactual subjunctive conditionals later, for despite their rather recondite appearance (Jonathan Vogel calls their use in epistemology ‘subjunctivitis’)⁶² they turn out to be surprisingly important in the virtue epistemology of education. Their property of non-contraposability, which we have now demonstrated, also assists in sidelining the sceptic for educational purposes (p.172).

Two Grades of Knowledge

Sosa’s 2007 work maintains the reliabilist, truth-conducive orientation of his 1980 paper, fleshes out the detail and draws a distinction between what he terms ‘animal’ and ‘reflective’ knowledge. Despite the names he gives them, these are both human accomplishments, and they can be analysed in terms of what he calls the ‘aptness’ of the performance of the knower (where ‘apt’ means that the doxastic success is due to the epistemic agent’s skill, and hence is creditable to him). Knowledge simpliciter is ‘apt belief’, whereas reflective knowledge is ‘apt belief aptly noted’.⁶³ Using the symbols K for animal knowledge and K⁺ for reflective knowledge, Sosa represents the latter definition thus:

$$K^+p \leftrightarrow KKp$$

[or $K^+_s p \leftrightarrow K_s K_s p$, if we consistently use the notation I defined earlier (p.26)]

⁶⁰ Ernest Sosa (2011) *Knowing Full Well* (Princeton: Princeton University Press).

⁶¹ He particularly disapproves of sensitivity as a requirement for knowledge. Sosa claims that his version, which, as we saw, introduces the concept of ‘safety’, ‘does not force us to reject the closure of knowledge under known entailment and deduction’ (Sosa, op. cit., 1996, p.277). His worry here seems to be that accepting the ‘closure of knowledge principle’ on Nozick’s tracking condition (3) leads to victory for the sceptic. However, I feel that his model invests too much faith in the believer’s cognitive abilities and that we *can* accept closure of knowledge in Nozick’s model as long as the sceptical issue can be defeated or at least sidelined. I attend to this later (p.170), where we see that Sosa’s ‘safety’ concept also forces us to ‘reject the closure of knowledge...’, despite his assertion to the contrary.

⁶² ‘Subjunctivitis is the doctrine that what is distinctive about knowledge is essential [sic] modal in character, and thus is captured by certain subjunctive conditionals.’ Jonathan Vogel (2006) ‘Subjunctivitis’, *Philos Stud*, 134, pp.73-88, p.73.

⁶³ Ernest Sosa (2007) op. cit., p.32.

In other words, to know a proposition p reflectively, we need not only to have an apt belief that p , but also to have an apt belief that our knowing p is defensible against pertinent sceptical doubts. Later I show that a consideration of the counterfactive (such that $\sim p$ is the case) is an important instance of these doubts in educational contexts (p.178). In other words, a virtuous knowledge of p can be seen to require that the knower be able to defend p against attack when entertaining $\sim p$ (where $\sim p$ falls short of extreme sceptical hypotheses).

Sosa's definition of 'reflective knowledge' sets the bar rather high, though, and a more moderate construal of knowledge, qua virtuously-acquired true belief, will allow the beliefs to be merely 'apt'. The learner may not 'know+' the beliefs in question, but he nevertheless 'knows' them to the extent that they are apt and hence creditable to him. This distinction between 'know'/'know+', or 'animal belief'/'reflective belief' or 'apt belief'/'apt belief aptly noted' is an important one in Sosa's scheme and we shall later explore its significance for education (p.187). For now, let us simply note that, desirable as the pursuit of full-blown reflective belief is to the education project, it represents a counsel of perfection and is not feasible as a sole regulative ideal, for both pragmatic and theoretical reasons. The pragmatic reason relates to the time required to pursue 'knowledge+'⁶⁴ rather than 'knowledge' and the theoretical reason recognises the irredeemably patchwork nature of human knowledge, due to the unexamined part of its genesis in childhood and later. Furthermore, mere 'animal knowledge' (that is, 'apt belief') is still to be regarded as creditable – because of its origin in effective epistemic performance – even though 'reflective knowledge' has greater value, being more akin to understanding.

Sosa explicitly identifies animal belief and reflective belief with Descartes' *scientia* and *cognitio* respectively. To make this connection even firmer, he quotes Descartes' *Second Set of Replies*, in which 'an atheist can clearly be aware that the three angles of a triangle are equal to two right angles ... but he cannot be certain that he is not being deceived'.⁶⁵ Descartes uses his acknowledgement that God exists, to convert *cognitio*

⁶⁴ I use this as shorthand for Sosa's 'reflective knowledge', taking a cue from his 'K+', which we saw above. Similarly with 'Know+': a term that Sosa does not use.

⁶⁵ 'Second Set of Replies' in J. Cottingham, R. Stoothoff and D. Murdoch (eds.) (1985) *The Philosophical Writings of Descartes* (Cambridge: Cambridge University Press). Sosa, (2007) op. cit., p.128.

into *scientia*, whereas Sosa uses knowing about knowing (where knowing is ‘aptly believing’) to achieve this safer perspective. Since these knowings are considered by Sosa to be epistemic performances, they can be evaluated along the same lines as other types of performance: for example, firing an arrow. The key notion of ‘aptness’ emerges from such analogical reasoning.

An Archery Metaphor for Knowing

Sosa talks of an archer’s shot being a performance assessable in three respects: ‘... the AAA structure: accuracy, adroitness, aptness’.⁶⁶ These equate to (i) success in hitting the target, (ii) whether the shot manifests skill and (iii) whether the success of the shot is due to the skill manifested, and hence creditable to the archer.

In terms of epistemology, Sosa claims that his ‘AAA’ structure for assessing performances in general maps onto beliefs qua performances, in that we can consider now their (i) correctness, (ii) manifestation of epistemic virtue and (iii) correctness because virtuous. This seems plausible, except that ‘correctness’ (which Sosa uses here interchangeably with ‘accuracy’ and ‘truth’) is, in this context, a property of *beliefs*, whereas ‘manifesting epistemic virtue’⁶⁷ seems to be something that a *person* does, not something we can attribute to a belief. However, granting Sosa (for the moment) his classification of beliefs as performances, this property of ‘manifesting epistemic virtue’ (that is acting in a way animated by such virtue) can be applied, since the attribute attaches to an act – that of believing – rather than a static outcome. The final criterion, ‘aptness’ relates both to beliefs and persons, by demanding that in the case of knowledge the belief be true *because* arrived at virtuously. Epistemically, the holder of such a belief is creditable for doing so, just as, ethically, an agent performing a good act prompted by virtue is admirable.

Interestingly, although Sosa makes no mention of it, the archery metaphor has historical antecedents which also carry a moral charge. Iris Murdoch points out that the Greek verb *hamartano* means to ‘miss the mark (as with one’s spear) and also, fail, miss one’s purpose, make a mistake, or (lastly) do wrong or sin’.⁶⁸ Similarly, we speak

⁶⁶ Sosa (2007) op. cit. p.22.

⁶⁷ Sosa (2007) *ibid.*, p.23.

⁶⁸ Iris Murdoch (1992) *Metaphysics as a Guide to Morals* (London: Allen Lane) p.99. The related ancient Greek word *hamartia* signifies an error in judgement, but it has more recently acquired the

of right and wrong answers: terms which have clear moral connotations. The human condition is to be both fallible and peccable. Elsewhere, Murdoch again makes clear the connection between the moral and the epistemic by asserting that ‘virtue is the attempt to pierce the veil of selfish consciousness and join the world as it really is’.⁶⁹ Aristotle, too gives us an archery-like metaphor: ‘not everyone can find the centre of a circle; only the man who knows how’.⁷⁰ He also offers the valuable insight that failure can take many forms, but success in a given case is singular, for, ‘it is easy to miss the target and difficult to hit it’,⁷¹ thus, ‘men are bad in countless ways but good in only one.’⁷² In terms of knowledge, we can consider the target proposition, p , to be surrounded by a large number of near-misses representing counterfactual beliefs, $\sim p$. Others attempts fail more drastically to hit the bullseye, but are still nearer to it in possibility-space than such sceptical hypotheses as the *genium malignum*. So while the proposition p is individual, its counterfactuals, $\sim p$, comprise a class.

Michael Slote, quoted by Juli Eflin,⁷³ uses the term ‘deplorable’ as the converse of ‘admirable’ in evaluating acts in general. In the case of beliefs, the counterpart of ‘creditable’ is not defined by Eflin, but Linda Zagzebski’s thinking suggests one possibility: ‘blameworthy’. She writes, ‘I have been treating knowledge as something the knower earns. It is a state in which the prize of truth is credited to [him]; perhaps [he] is even deserving of praise for it’.⁷⁴ However, if a putative knower holds false beliefs – if he misses his epistemic target – we may not necessarily find him blameworthy, but, on the contrary, perhaps even consider his virtuous *motivation* to be praiseworthy. We do not, for instance, withhold due credit from Newton and deny his possession of intellectual virtues because his ideas were later shown to be wrong in many respects. This is more like a moral judgement than one about his knowledge. Conversely, if an epistemic agent holds *true* beliefs without the exercise of cognitive virtue – if he hits the target by chance, or with excessive help, for example – it would

meaning of a person’s tragic flaw that ultimately leads to his downfall. In New Testament Greek, the word *hamartia* is usually rendered in English translation as ‘to sin’ or ‘to do wrong’.

⁶⁹ Iris Murdoch (1985) ‘The Sovereignty of the Good Over Other Concepts’, Reprinted in Roger Crisp & Michael Slote (1997) *Virtue Ethics* (Oxford: Oxford University Press) p.110.

⁷⁰ Aristotle, *Nicomachean Ethics*, bk.II, 9, 1109a26. Unless otherwise indicated, all quotations from the *Nicomachean Ethics* are from J.A.K. Thompson and Hugh Tredennick [trs.] (1953, 2004) *Aristotle: The Nicomachean Ethics* (London: Penguin Books). [NE].

⁷¹ Aristotle, *NE*, bk.2, 6, 1106b33.

⁷² Aristotle, *NE*, 1106b35.

⁷³ Michael Slote (1992) *From Morality to Virtue*. (New York: Oxford University Press) in Juli Eflin (2003) ‘Epistemic presuppositions and their consequences’ *Metaphilosophy* vol.34, nos.1/2, p.54.

⁷⁴ Linda Zagzebski (2003) ‘The search for the source of epistemic good’ *Metaphilosophy* vol. 34, nos.1/2, p.20.

be a strange use of language to label this as blameworthy. Perhaps ‘non-creditworthy’ (or, to use Sosa’s terminology, ‘inapt’) captures the idea best.

Departures from Greek Tradition of Virtue

Sosa’s construal of knowledge as having an ‘AAA’ structure seems to have departed significantly from his prefatory promise to present a ‘Virtue Epistemology in line with the tradition found in Aristotle, Aquinas...’.⁷⁵ The middle A – Adroitness – is perhaps the nearest feature in his model to a virtue, but his elaboration of the concept shows it to have little in common with Greek notions of *aretē*. We see that adroitness is linguistically equivalent to dexterity, and dictionary definitions of ‘adroit’ refer to ‘shrewdness’, ‘craft’ and ‘physical skill’.⁷⁶ Sosa gives the criterion for adroitness as ‘whether it manifests skill’,⁷⁷ and he also uses the words ‘competence’ and ‘epistemic ability’ interchangeably with this term (this last expression being explicitly equated with virtue.⁷⁸)

However, skills and virtues are quite clearly demarcated in the Aristotelian scheme, so in blurring the distinction Sosa is departing significantly from the Greek tradition he claims to be following. Granted, *technē* is an intellectual virtue and this would be the nearest to Sosa’s notion of epistemic virtue, but technical reason and technical skill are not the same thing. The shoemaker has technical reason, but uses technical skill (adroitness in cutting leather; deftness in stitching) to operationalise the virtue. If adroitness were to be a virtue in the Aristotelian sense, it would plausibly be located at the mean between two vices, and this seems not to be the case. One could suggest that gaucheness might be the corresponding vice, but it is difficult to identify what a vicious excess of skill might be like. To be sure, Plato warns against devoting too much effort to developing a skill such as musical proficiency, but this is not a criticism of excess skill per se, but a caution that the process of acquiring it wastes time⁷⁹ which could be used for nobler purposes, or, worse still:

⁷⁵ Sosa (2007) op. cit., ‘Preface and Acknowledgements’ (repeated on the dust-cover). He does go on to name Reid and Descartes in his list of influences, so we ought not judge him too harshly for his departures from the Greek tradition.

⁷⁶ Philip Gove (ed.) (1993) *Webster’s Third New International Dictionary* (Cologne: Könnemann).

⁷⁷ Sosa (2007) op. cit., p.22.

⁷⁸ *ibid.*, p.61.

⁷⁹ What modern economists call ‘opportunity cost’.

...when a man abandons himself to music ... and gives his entire time to the warblings and blandishments of song ... he melts and liquefies ... and makes of himself a 'feeble warrior'.⁸⁰

Overall, then, we may conclude that Sosa's variety of epistemology, with its emphasis on skills and faculties, is valuable in many respects, but it is not undergirded in any substantial way by the virtue theory of Aristotle.

In limning the outlines of virtue epistemology, the furthest territory from Sosa's is that of Linda Zagzebski. Whereas Sosa's grounds are a dissatisfaction with traditional Anglo-American epistemology, in particular the 'foundationalist vs. coherentist', 'internalist vs. externalist' and 'Gettier vs. the rest of epistemology' debates, Zagzebski maps her virtue epistemology onto a distinctly Aristotelian landscape. Some commentators⁸¹ have classed Sosa's analytical work in this area as 'low church' and Zagzebski's neo-Aristotelian response as 'high church'.

Virtue Epistemology (ii) - Linda Zagzebski

Linda Zagzebski suggests that Sosa's virtue epistemology is nothing more than reliabilism under a different name and, as such, is a species of consequentialism rather than a legitimate virtue epistemology derived from *aretic* ethics (Zagzebski, *VOM*,⁸² p.xiii). In contrast, her own work *is* so derived, she claims, in keeping with her assertion that '...(N)ormative epistemology is a branch of ethics' (*VOM*, p.xv). She defines knowledge as '... a state of cognitive contact with reality arising out of acts of intellectual virtue'.⁸³

Zagzebski's is an ambitious project: to delineate a virtue epistemology which is not only derived from virtue ethics, but also subsumed under it. In her strongly assimilationist account, she states that 'The account of the virtues that I have given ...

⁸⁰ Plato, *Republic* bk.III, 411a-b.

⁸¹ Amongst them Alvin Goldman and Enrique R Moros & Richard J. Umbers (2004) 'Distinguishing Virtues from Faculties in Virtue Epistemology', *Southern Journal of Philosophy*, vol.XLII, p.65.

⁸² I shall use '*VOM*' to refer to Linda Zagzebski's seminal (1996) *Virtues of the Mind* (Cambridge: Cambridge University Press).

⁸³ Zagzebski (1996) *VOM*, p.298 [bold face in original].

subsumes the intellectual virtues under the general category of the moral virtues or *aretai ethikai*, roughly as Aristotle understands the latter.’ (*VOM*, p.255). Her theory gives practical wisdom – *phronēsis* – the key role of ‘...mediat(ing) between and among the whole range of moral and intellectual virtues’ (*VOM*, p.xiv).

Moreover, Zagzebski complains that epistemology has hitherto concentrated too exclusively on the isolated propositional beliefs of the individual ‘knower’ and has largely ignored the non-cognitive and social aspects of knowledge, while also neglecting the two (separate) important epistemic goods of understanding and wisdom. She sees ‘understanding’ as something akin to intellectual coherence: ‘One understands *p* as part of and because of one’s understanding of a system or network of truths’.⁸⁴ Her view of ‘wisdom’ is based explicitly on Isaiah Berlin’s metaphor of the fox and the hedgehog: ‘The fox knows many things, but the hedgehog knows one big thing’.⁸⁵ The search for wisdom is thus not a matter of piling up a large number of propositions, *p*, nor a process of arranging these into a coherent structure, but rather a seeking after the single simplifying insight that enables ‘grasping the whole of reality’. One wonders if such a seeking of a single simplifying insight is the act of an Aristotelian agent, having more in common, perhaps, with the Platonic search for Forms.

In respect of her wish to foreground the social dimensions of knowledge, Zagzebski has something in common with Sosa’s stress on the importance of the ‘epistemic community’.⁸⁶ This intuition will later be shown to be particularly valuable for the present work of mediating between virtue epistemology and education.

Zagzebski’s Task

Zagzebski’s mission to ameliorate epistemology’s perceived ills by appealing to a particular interpretation of the Aristotelian notion of *aretē*, and assimilating the epistemic virtues to the moral, faces two serious objections:

1. In evaluating an act, we can only legitimately apply moral considerations if the act is voluntary. On the face of it, beliefs do not appear to be voluntary in nature.

⁸⁴ Zagzebski (1996) *VOM*, p.49

⁸⁵ Zagzebski (1996) *VOM*, p.45. Berlin, in turn, takes his image from the Greek poet Archilochus, Zagzebski tells us.

⁸⁶ Sosa (1980) *op. cit.*, p.160.

2. Aristotle himself did not include the intellectual virtues among the moral virtues.

If a case is to be made for regarding intellectual virtue as simply a subset of moral virtue, these two objections need to be dealt with convincingly by Zagzebski. There is also an issue of nomenclature, which I shall tackle first. The word ‘moral’ is a loaded term, which often carries connotations of right and wrong, praise and blame and duty. Zagzebski sometimes uses the term in this way, or employs deontic locutions such as: ‘we blame a person who makes hasty generalizations’ (*VOM*, p.5). However, another construal is an *aretaic* one and this is the meaning we associate with Aristotle’s moral virtues. Here we are concerned not with evaluating actions but with the character and motivations of the actor. William Frankena explains:

that deontic terms and judgments are more like legal ones than aretaic terms and judgments are; that the latter are or involve scalar predicates while the former are or include non-scalar ones; that aretaic judgments can be made of both actions and persons, as well as of motives and intentions, whereas deontic judgments are more properly made of actions than of persons, motives, or intentions; and that a reference to motives and intentions is involved in aretaic judgments in a way in which it is not in deontic ones.⁸⁷

This characterisation of *aretaic* terms as scalar (as opposed to the legal, or binary nature of deontic judgements) is an important one, to which I shall return later (p.63)

Having registered this potential for equivocation over the word ‘moral’, we return to Zagzebski to see how she deals with the two objections I have raised over her project to subsume the intellectual virtues under the moral. Taking these in order, we find that Zagzebski quotes approvingly Christopher Hookway’s view that evaluation in the epistemic realm ought to concern itself not with belief as such but with the *act* of enquiry. Qua act – and hence voluntary in nature, to some extent at least – enquiry is therefore susceptible to moral evaluation. This, Zagzebski points out, is a different focus from that of Aristotle, for whom the paradigmatic intellectual act is not enquiry but contemplation. By shifting the emphasis thus, thinking is construed in a more active way: a type of behaviour rather than passive cogitation. This, we see, has much in common with Sosa’s notion of epistemic performance (p.44); but Zagzebski makes the additional claim that thinking, being a species of behaviour, falls therefore under the remit of moral evaluation. She suggests that in everyday life we routinely apply moral standards in evaluating intellectual behaviour: ‘we blame a person ... who

⁸⁷ William K. Frankena (1973) ‘An Ethics of Love Conceived as an Ethics of Virtue’, *The Journal of Religious Ethics*, vol.1, pp.21-36, p.24

ignores the testimony of reliable authority.’ (*VOM*, p.5) Merely because it is behaviour, however, we might argue that this does not necessarily make it subject to the will.

Zagzebski tackles the ‘beliefs-are-not-voluntary-hence-not-morally-evaluable’ objection by pointing to the range of voluntariness which can be ascribed to acts. Cases in which acts follow from careful deliberation are rare, yet we still generally hold persons responsible for their acts as long as they are not *forced* into their commission. Similarly, beliefs are held to various degrees of voluntarism, occupying a continuum parallel to that for acts. Hence, so her argument goes, if we are willing to evaluate acts morally across a substantial part of their spectrum, we are entitled to do that for beliefs too. The legitimacy of this evaluation will depend on the position of the act or the belief in its respective continuum: from reflex acts and perceptual beliefs at one extreme, to pre-meditated acts and carefully reasoned beliefs at the other extreme. Zagzebski feels that ‘... there is no reason to think that intellectual courage, perseverance, honesty or sincerity are any less voluntary than courage, perseverance, honesty and sincerity considered as moral virtues’ (*VOM*, p.60).

This is a plausible assertion, but it does rather undermine her case by pointing to a disanalogy between beliefs and acts. Courage, perseverance and so on are attributes of acts (we can talk of a courageous rescue of a wounded fellow-soldier in battle, for example) but they are properties of the *enquiries* that led to beliefs, not of the beliefs themselves. For example, a belief in the non-contraposition of subjunctive conditionals is not on the face of it labelled with the virtue of the perseverance which it took the believer to acquire it.⁸⁸ An investigation can show intellectual courage or perseverance, but it is unclear how these virtues can attach to the beliefs thus formed.

If parallels are to be drawn with moral act evaluation, this epistemic evaluation too ought to be directed towards truth-seeking *activities* rather than towards the *states* of belief which result. Zagzebski can thus be considered to be a zetetic responsibilist.

⁸⁸ Having said this, I later argue (p.182) that there is a sense in which a virtuous knowledge of proposition *p* is mentally stored together with the resources to defend *p* against attack from a consideration that $\sim p$ might be the case. These resources are limited, however, so the believer might surrender in the face of superior forces and revise his belief-web by derogating *p* in favour of $\sim p$ and following through the doxastic consequences. Furthermore, for virtuous belief-revision, these resources ought not to include an indication that acquiring *p* took perseverance, it seems to me, for this will reduce the agent’s willingness to derogate it when purely epistemic considerations would suggest that he should. Hard-won beliefs can be unreasonably tenacious.

The difficulty here is that in the moral realm, the agency flows character→act, (to simplify greatly) whereas in the epistemic realm it runs character→act→belief.⁸⁹

There is thus no difficulty in bringing epistemic acts into the moral bailiwick, but, unless ‘beliefs’ are re-configured as ‘believings’ and are classified as acts, they seem to be out of place. If Zagzebski wants beliefs to be on the voluntary spectrum, and hence to be morally evaluable, she will need to embrace a view of belief-maintenance as being every much an act as belief-formation, belief-modification and belief-derogation. However, she sidesteps such a manoeuvre, saying that she is interested primarily in the stable traits behind the activity, and neither in the specific activity itself nor even in particular beliefs – claiming that ‘the point of a virtue theory is to shift the focus of evaluation from the act or belief to the trait of character,’ (*VOM*, p.73). She cannot, and does not, shift it completely, however, for the beliefs formed must also be true if we are to consider the agent’s actions as fully epistemically sound.

Next we consider a key difference between Zagzebski and Sosa on the important issue of what the intellectual virtues consist in, and, again, how permissible it is to locate them in the moral realm.

Differences Between Zagzebski and Sosa

In his recent work, Sosa equates intellectual virtue with ‘epistemic ability’⁹⁰ and includes both skill (‘adroitness’) and faculties, including eyesight, as part of his rather thin account of intellectual virtue. The latter inclusion would be particularly problematic for both Aristotle and Zagzebski, for not only is eyesight not a virtue of a man in the Aristotelian sense,⁹¹ it cannot be convincingly brought into the moral realm, as Zagzebski’s programme requires. It is counter-intuitive, and seems to be mistaken, to hold a person morally culpable for having poor eyesight and hence rank him as being not as epistemically adroit as another with perfect vision.

⁸⁹ Here I use arrows (→) to indicate the flow of agency, not the meaning listed in the table of symbolic conventions of material implication.

⁹⁰ Sosa (2007) op. cit., p.61.

⁹¹ Aristotle regards seeing to be the virtue of an eye (‘... it is through the excellence of the eye that we see well.’ *Nicomachean Ethics*, 1106a18) but he is speaking here only of its excellence qua function, not its human virtue, that is, a virtue of the soul. He makes this distinction clear immediately: ‘... *human* excellence will be the disposition that makes one a good man and causes him to perform his function well.’ [italics in original translation]. So in one case we have the optical and physiological properties of a body part, and, in the other, the psychological dispositions of a *person*. Of course, Aristotle’s *hylomorphism* makes a strict dichotomy between the *hulê* of the eye and its animation by the soul untenable, but a dispositional virtue such as courage clearly belongs to the soul first and foremost – and only to the eye derivatively (we may talk of an ‘unflinching eye’ for example).

However, I feel that we can accept Zagzebski's line that sight, hearing, memory and so on are not virtues but faculties, and yet still find a place for them in the moral arena. For example, a car-driver causing an accident because of uncorrected known defective vision would be regarded as negligent, and hence responsible to some degree. In the intellectual realm too, failure to take reasonable steps to compensate for visual impairments, in a situation which required good visual acuity, would be a failure to seek maximal 'cognitive contact with reality' (as Zagzebski terms knowledge) and would hence also be evaluative in a negative way. In this respect, the putative knower, neglecting to compensate for defective eyesight in a truth-seeking activity that required it, would be just as culpable as one who 'makes hasty generalizations'. Sosa's description of belief as a 'performance' which can accrue credit or discredit to the performer shows that he too intends a moral evaluation to be possible on this account, so the distance between Zagzebski and him may not be as great as it initially appears. Plausibly, the virtue does not reside in eyes, ears, memory and so on, but in how they are used and what steps are taken to compensate for their imperfections. We see that it is in their use that virtue is exhibited; it is in their use that credit (or discredit, or non-credit) flows to the user. Nevertheless, Sosa's inclusion of eyesight and so on as virtues simpliciter, rather than as tools for the exercise of virtue has led to him being labelled a 'faculty reliabilist', and not, according to Zagzebski, a virtue epistemologist. He calls himself a 'virtue perspectivist', since his definition of 'reflective knowledge' involves the knower attaining a perspective on his knowing by having a belief about his belief (or by possessing, as he puts it, an 'apt belief aptly noted'⁹²).

Aristotle's Distinction Between the Intellectual and the Moral Virtues

The other objection to Zagzebski's species of virtue epistemology is that it strongly claims continuity with Aristotle's discussion of *aretē*, yet departs from his analysis in significant ways. This is not necessarily a cause for criticism: indeed, merely restating the arguments of Aristotle all over again would represent a failure to develop epistemology, in much the same way as repeating Aristotle's faulty scientific beliefs held back progress in science for a considerable time. Nevertheless, Aristotle's philosophical works have stood the test of time, so we shall make a brief excursion into the *Nicomachean Ethics* before considering Zagzebski's neo-Aristotelian re-

⁹² Sosa (2007) op. cit., p.32.

interpretation, in which she brings the intellectual virtues within the ambit of the moral. In this section, I also introduce some analysis by Aristotle that becomes significant in later chapters.

Aristotle is in no doubt that there *is* a clear distinction between the excellences of the intellect (*dianoia*) and those of the character (*ēthikē*): ‘Virtue, then, is of two kinds, intellectual and moral’ (*NE* bk.1, 1103a14). Under the former heading, he places the examples of theoretical wisdom, understanding and practical wisdom (*sophia, nous and phronēsis*) and under the latter he puts virtues such as liberality and temperance. Although both classes consist of acquired excellences, for Aristotle – importantly – they have different aetiologies: instruction in the case of the intellectual *aretai* and habit in the case of the moral.

There is also a difference in the goods at which they aim. The intellectual virtues are truth-directed in their motivational and operational natures: ‘Thus the attainment of truth [*alethia*]⁹³ is the task [*ergon*] of both of the intellectual parts of the soul [i.e., *nous* (understanding) and *orexis* (desire)]’. [*NE*, bk.6, 1139b10]. The moral virtues are directed towards good action: ‘... we praise ... the good man and virtue, because of the actions and effects that they produce ...’ [*NE*, bk.1, 1101b15]. However, *phronēsis* (an intellectual virtue) straddles this division into intellectual and moral virtues, for it aims at developing us as good men. To achieve a fuller understanding of this taxonomy, Aristotle’s theory of the virtues needs to be set in the wider context of his theory of mind (or ‘soul’⁹⁴).

Aristotle proposes an initial division of the mind into a part which deals with the rational (the *logistikon*) and a part concerned with the irrational (the *alogon*). Both parts have an appetitive aspect – a desire for knowledge in the case of the rational half, as mentioned a moment ago, and one for baser fulfilment in the irrational portion. The irrational part is further subdivided into what he calls the ‘vegetative’ part, common to other living things and not susceptible to reason at all, and an ‘appetitive’ part that *is*, to some extent at least, affected by reason. Aristotle explains the latter phenomenon as

⁹³ This literally means ‘not being covered’, so the process of finding the truth is one of unveiling.

⁹⁴ I recognise here that there are dangers in conflating the modern notion of ‘mind’ with Aristotle’s understanding of ‘soul’. In particular, his concept of the soul as the ‘form’ of the body is not entirely congruent with more recent views on mind. Nevertheless, his discussion of rational and irrational parts of the ‘soul’ maps reasonably well onto present-day analyses of the ‘mind’.

that of the irrational appetitive part ‘taking account’ (*logos echein*) of reason (*NE*, bk.1, 1102b33) along the lines of a son showing filial respect for the advice of his father. However, the appetitive part of the rational part of the soul (the desire to know) is not just affected by reason in the way in which a child responds to fatherly advice, but is fully rational in its own right.

It is this division of the soul into rational and irrational parts that provides Aristotle with a justification for dividing the virtues into intellectual and moral classes respectively. In his scheme, ‘virtue’ means different things vis-à-vis intellectual activity and moral conduct. There must be, though, a degree of what we might term ‘permeability’ between the two parts, for excellences could not be ascribed to man qua rational animal if his moral actions were entirely free of rational influence. These connections are seen in Aristotle’s metaphor of fatherly admonition and praise – from the rational part of the soul – persuading the childlike irrational part to curb its appetites. A further indication that Aristotle subscribes to this view is his speculation that the rational and irrational parts may be as conjoined as the convex and concave aspects of a circle. (*NE*, bk.1, 1102a30).

Moreover, all of the *aretai* – intellectual and moral – are under the jurisdiction of the intellectual virtue of *phronēsis*, for an *aretē* is ‘a purposive disposition, lying in a mean that is relative to us and determined by a rational principle, and by that which a [*phronimos*] would use to determine it. It is a mean between two kinds of vice, one of excess and the other of deficiency ...’ (*NE*, bk.2, 1107a1-5). Thus, in order to be able to use any of the moral *aretai*, or a combination of them, to guide action in accordance with the good in a particular situation, the person of practical wisdom needs to be animated by the virtue of *phronēsis* to determine the mean between extremes. A crucial point to make here is that eudaimonia – flourishing – will not only *result* from this use of the intellectual and moral virtues in accordance with *phronēsis*, it is also *constitutive* of the exercise of the virtues themselves. So the intellectual and moral virtues are not only interlinked, they are also indispensable for eudaimonia, both as means and as ends.

Bearing in mind this permeability, we shall now follow Aristotle in examining the intellectual virtues in more detail. Just as he divided the entire soul into two parts – the rational and the irrational – Aristotle further subdivides the rational into two: that

which deals with sublunary, contingent matters and that which contemplates the necessary, eternal and invariable. These two parts could be termed the practical (or deliberative) and the theoretical (or scientific). It is important to stress, though, that Aristotle's construal of science is very different from our modern notions, his being the contemplation of that which is not susceptible to deliberation (*boulesis*), since the necessary, by definition, cannot be otherwise and is thus not, he claims, a suitable topic for deliberation. The other part of the soul – the practical – deals with more quotidian matters such as making things (*poiēsis*) and engaging in action for its own sake (*praxis*).

The three 'theoretical'⁹⁵ virtues are *sophia*, *nous* and *epistēmē* – usually translated as 'wisdom', 'understanding' and 'knowledge'. The two practical virtues are *phronēsis* and *technē*, the translations of which are usually 'practical wisdom' (or 'prudence') and 'technical reason' or ('technical skill'). In each case, I shall adopt the former translation, for the following reasons: (i) 'Prudence' is arguably better captured by the Greek *sōphrosynē*, is only part of practical wisdom, and is not generally regarded as an unalloyed virtue.⁹⁶ The Latin *prudentia* is equivalent to the Greek *phronēsis*, but I suggest that the word 'prudence' in contemporary English usage has a meaning more aligned with 'temperance', 'caution', 'risk-aversiveness', 'moderation' or 'tight-fistedness', rather than notions of a more expansive, other-regarding, practical wisdom. Perhaps, though, these prudent attributes need to be in place to allow the *phronimos* to dispense wisdom without being hampered by a practical *faux pas*. It would be difficult to help a student in his epistemic predicament if we failed to comply (to at least some degree) with the norms of our institution, for instance. So, in this sense, the construal of *sōphrosynē* as 'keeper of *phronēsis*' conforms quite well to a notion of 'prudence', in that the *phronimos* needs to exercise some degree of circumspection if he is to be free to assist others. I shall thus use 'practical wisdom' for *phronēsis*. (ii) Skills are not the same as virtues but are the means by which the virtues are operationalised.⁹⁷ *Technē* is thus aligned with Ryle's 'knowing how',⁹⁸ an example of which might be the technical knowledge of the shoemaker, who also needs

⁹⁵ This term is used in preference to 'scientific' to avoid the possibility of confusion with modern empirical science.

⁹⁶ Blake calls prudence a 'rich, ugly old maid courted by incapacity' in A.C. Grayling (2001) *The Meaning of Things* (London: Phoenix) p.41. Blake's definition comes into play in later chapters. I intend a similar meaning – that is a shrewd self-interest – when using the word 'prudential'.

⁹⁷ Some virtues do not seem to require skills to take effect: for example charity and chastity.

⁹⁸ Gilbert Ryle (1949) *The Concept of Mind* (London: Hutchinson) p.30.

specific skills (such as the manual dexterity required for the accurate cutting of leather) in order to operationalise this know-how. Thus, *phronēsis* and *technē* will be thought of as ‘practical wisdom’ and ‘technical reason/rationality’ respectively. The latter phrase is sometimes rendered ‘craft’, as in ‘the craft of the classroom’ – like the ‘art of the angler’. (Incidentally, the translations I have rejected represent concepts that are prominent in much recent educational legislation and government discourse in the West in recent times, which promote the model of the teacher as a prudent master of pedagogical technical skills.)

Although they are associated with the mundane fields of contingency, action and making (rather than the rarefied, Platonic realm of theory in which the world is seen as a distraction) *phronēsis* and *technē* are both nevertheless to be regarded as intellectual virtues, housed in the rational portion of the mind. They also exert some influence on at least part of the irrational area of the mind, and hence have some moral import – in much the same way as a father has a role in the moral welfare of his son. The strongest candidate for this paternalistic role is *phronēsis*, the target of which is beneficial action, rather than *technē*, which concerns itself with making (not of itself a moral action).

The key difference between the two worldly (or practical) virtues is the relative importance of the *activities* associated with each virtue – considered for their own sake – compared with the *outcomes* of these activities. *Technē* informs *poiēsis* (productive activity), and *phronēsis* is associated with *praxis* (beneficial social activity). In the case of *technē*, any value it has lies in the products of the resultant activity, whereas for *phronēsis*, the resultant activity is a valued end in itself. As Aristotle puts it: ‘... because, of Making, something beyond itself is always the object, but [this] cannot be [so] of Doing, because the very well-doing is in itself an end’ (*NE*, 1140b3).⁹⁹ DP Chase’s (1847) translation of *poiēsis* and *praxis* as ‘making’ and ‘doing’, respectively, can be illustrated well by our modern distinction between ‘making lunch’ and the colloquial ‘doing lunch’. The former typically issues in an identifiable product on a plate as a separate end, while the latter is a social activity whose end is simply the act of lunching sociably. Cooking is a *poiēsis* informed by *technē* whose end-product is food, while social dining can be a *praxis* informed by *phronēsis*, with no distinct end-

⁹⁹ Aristotle, *Nicomachean Ethics*, bk.VI (tr. DP Chase, 1847) (London: Walter Scott Limited). Chase translates *phronēsis* as ‘good sense’.

product beyond the activity itself.

The paradigm case of the bearer of *technē* is the shoemaker, whose *poiēsis* results in shoes. The good resides in the *poiēma* – the shoe itself – rather than in the productive activity from which they issued. In the limiting case, one would wish for a transfer of *technē* into *poiēmata* without going to the trouble of manufacture. A process which somehow transformed knowledge directly into useful products without any intermediate production stage would be highly desirable. We would not mourn the loss of *poiēsis*. In industrial manufacture, an efficient transformation of ideas into products is sought, so the time and energy expended on productive activity is to be minimised.

In contrast with the case of *technē*, it is the activity with which *phronēsis* is associated – *praxis* – in which value resides, rather than the outcomes of the activity. Living the good life in a community setting is an end in itself, and any durable products of this activity are less important than the activity per se. As in the case of *technē*, the artefacts are only of value insofar as they support the good life. However, unlike *technē*, in which the action stage is merely a tiresome way of achieving the desired productive ends, the *praxis* with which *phronēsis* is involved is indispensable; indeed, it is its *raison d'être*. During *praxis*, the *phronimos* is able to develop excellences characteristic of the good life and use these for the benefit of others in the community. Because of the contingent nature of this enterprise, however, the outcomes cannot be predicted in advance (as they must be for the *technē-poiēsis* system, in the form of an *eidos* or plan), so it is to be regarded not as a process of *phronēsis* controlling *praxis* to arrive at a predetermined end but rather as a continual dialogue between thought and action, in which the ends can change. *Praxis* is not caused by *phronēsis* (as *poiēsis* is caused by *technē*) but is in a dialogical relationship with it. This, it is stressed, is a dialogical and not a dialectical relationship, for there is no definitive and final resolution, but an ongoing interplay between *phronēsis* and *praxis*, characterised by mutual influence and feedback loops mediated by the attunement of the *phronimos* to the particulars of the situation upon which his *phronēsis* is being brought to bear.

Now considering *epistēmē* alongside *technē* and *phronēsis*, this notion of causation (mutual or otherwise) can be used as a way of analysing the thought-action

relationship. *Epistēmē* is not the sort of thing which could cause action, being a rather rarefied, Platonic class of knowledge. As Ryle puts it, in attacking what he terms the ‘intellectualist legend’: ‘Intelligent practice is not a step-child of theory’.¹⁰⁰ *Technē*, on the other hand, clearly is a type of knowledge, or virtuous disposition, which can issue in productive action, and the thought-action relationship is largely one-way. Thus, intelligent making *is* a step-child of technical reason. Granted, the vagaries of the materials used may cause some feedback to the artisan and prompt him to modify his technique, but production typically relies on technical knowledge to achieve fixed ends, so such modification is merely compensatory and not a radical departure from the *eidōs*. *Phronēsis* also leads to action, but the relationship in this case is more one of interdependence than one of simple causation. *Phronēsis* informs *praxis*, but *phronēsis* is in turn informed by the contingencies of *praxis*. Moreover, the process is not one of pursuing fixed ends or producing durable outcomes, but a continually-shifting interplay between ideas and action calculated to maintain, and redefine, the flourishing (*eudaimonia*) of those involved.

Having examined Aristotle’s analysis of the virtues in some detail, we return to an inheritor and developer of this tradition: Linda Zagzebski.

Zagzebski on the Development of Intellectual Virtue in the Agent

Zagzebski departs from Aristotle’s analysis of the intellectual and moral virtues in a number of significant respects. Aristotle, as described above, sees the intellectual and moral virtues as being very different. Although they are both classes of acquired excellences, they have different origins: instruction in the case of the intellectual *aretai* and habit in the case of the moral. Furthermore, they reside in different parts of the soul: the rational and the irrational, respectively. The intellectual virtues are divided into two types: the practical and the theoretical.

Zagzebski takes issue with such an analysis of the different aetiologies of the intellectual and moral virtues, claiming, *pace* Aristotle, that the intellectual virtues are acquired by the very same process as are the moral virtues. Her line on this seems

¹⁰⁰ Ryle, *op. cit.*, p.26.

highly plausible, and we may suspect that Aristotle is wrong to conflate teaching with instruction and to see it entirely as a *technē* or *ars demonstrandi*.¹⁰¹ As well as direct teaching qua instruction, teachers sometimes arrange things so that learners can in a sense ‘invent’ or construct their own knowledge, skills and intellectual virtues.

Zagzebski, contra Aristotle, argues that the journey towards intellectual virtue is parallel to that towards moral virtue. By cultivating the intellectual virtues, we are in a position to acquire knowledge. First is a stage of imitation of virtuous persons. By practice and habituation, and the overcoming of *akrasia* (weakness of will), both the intellectual and the moral virtues are gradually acquired and internalised. She takes the paradigm example to be the acquisition of the moral virtue of courage, as described by Aristotle, to illustrate this. By imitating a courageous person, one gradually develops both the feelings associated with courage and the ability to identify those occasions on which courageous action is required. But, Aristotle asserts, there is an intermediate stage at which the agent knows what to do but suffers from *akrasia* and is thus unable to do the virtuous thing. Self-control may later enable the tyro person of courage to perform ‘acts of courage’ (with the emphasis on the acts) but these cannot be said to be ‘courageous acts’ (with the emphasis on the virtue) since there is a degree of having to resist contrary temptations. Eventually, however, truly courageous acts are performed because the ‘firm and unchangeable character’ of the virtue – courage – is now fully acquired.

A parallel case to this acquisition of moral virtue by imitation, habituation and internalisation is set out for intellectual virtue by Zagzebski (pace Aristotle, who, we saw, maintains that the intellectual virtues are acquired by instruction). She lists examples of the intellectual virtues: ‘... intellectual carefulness, perseverance, humility, vigor, flexibility, courage ... open-mindedness, fair-mindedness, insightfulness ... [and] ... intellectual integrity’ as well as ‘... the virtues opposed to wishful thinking, obtuseness and conformity’ (*VOM*, p.155). Zagzebski does not claim that her list is exhaustive, nor that all of the intellectual virtues are Aristotelian means between extremes. Nevertheless, it is clear that at least some intellectual virtues can be identified as the midpoint between two vices. Let us return to Aristotle for a moment.

¹⁰¹ I take the latter term from Edmund Husserl, who ‘...distinguished between the search for the truth that he called “*ars inveniendi*” and the exposition and verification of the truth which he called “*ars demonstrandi*”...’ Alexandru Giuculescu (1998) ‘The Leibnizian dimension of Husserl’s phenomenology’, *Analectia Husserliana*, vol.LII, bk.1, p.107.

He talks of courage simpliciter as ‘... destroyed by excess and deficiency and preserved by the mean’, and spells this out in the following way:

The man who shuns and fears everything and stands up to nothing becomes a coward; the man who is afraid of nothing at all, but marches up to every danger, becomes foolhardy. [NE, 1104a20-26]

Similarly, *intellectual* courage, if seen through an Aristotelian lens, could thus be considered as the mean between intellectual rashness and intellectual cowardice. One might be overly thorough in amassing evidence or, at the other extreme, jump to conclusions too quickly: a distinction which Zagzebski also makes. Acquiring the disposition to find this proper midpoint reliably takes time and is context-dependent.

For example, we might feel that a medical researcher, deciding whether or not to publish details of a new treatment, ought to take this decision by means of a reasoning process which is neither rash (thus potentially hazardous) nor cowardly (thus depriving patients of a possible cure) – a process in which good judgement occasioned by *phronēsis* will be indispensable. If we apply Zagzebski’s – as opposed to Aristotle’s – account of intellectual virtue-acquisition to our scenario, it can be seen that the trainee researcher would be able to begin the acquisition of intellectual courage by *imitating* more experienced members of the research team (rather than by being directly instructed by them as to what intellectual courage consists in). However, *akrasia* would allow the trainee rashly to believe things which he knew he ought not to believe, since they were not in fact warranted by adequate empirical evidence. Checks and balances such as research protocols, peer-group influence and legislation would, however, usually prevent the outcomes of such intellectual rashness from making it into print. Nevertheless, the researcher might continue to believe his unwarranted conclusions, whether published or not.

The next stage is one of ‘intellectual self-control’ in which ‘a person has to stop [himself] from accepting inadequate evidence ... or lapsing into ways of which [he] disapproves (VOM p.155).’ Now, our researcher believes only that which is not the product of rash reasoning, but he has to work hard at maintaining this disposition and may even overcompensate by being unduly careful and unnecessarily repetitive. He still lacks the virtue of intellectual courage, however, for his ‘... behaviour may be correct, but it is not grounded in a “firm and unchangeable character”, as Aristotle characterises the person who truly possesses virtue’ [VOM, p.155].

In the final stage, our exemplary researcher internalises the virtue and embodies the courageous scientist who is neither rash nor cowardly qua medical researcher, and who reliably knows when the evidence is good enough to publish. He shows good judgement in not publishing if there is still sufficient doubt to identify the protection of patients as being the over-riding concern, but does publish for the sake of these same patients when the potential benefits outweigh the remaining risks. *Phronēsis* will be a vital part of these reasoning processes, since it enables this happy medium to be found.

Running alongside this proposed development of intellectual virtue by imitation, habituation and internalisation, are changes in the affective stance of the epistemic agent towards belief-formation. Not only does the virtuous person do the right thing for the right reason, he takes pleasure in doing so. Zagzebski quotes Aristotle on this: ‘The man who does not rejoice in noble actions is not even good; since no one would call a man just who did not enjoy acting justly...’ (*VOM*, footnote, p.151). The translation I use gives ‘rejoice’ as ‘delight’, again capturing the notion that enjoyment is part of virtuous action.¹⁰² We see that these assertions concerning the joy, delight and delectability of virtuous actions are of a piece with Aristotle’s broader thesis that acting out of virtue is partly constitutive of eudaimonia, as well as being instrumental in achieving such flourishing.

Not everyone endorses this link between virtue and pleasure: for example, Kant and the Puritans both view mental anguish as a more fitting accompaniment to virtuous action. One ought, they feel, to wrestle with one’s baser instincts and defeat them in order to acquire credit – a precursor of Freud’s description of the *superego* taming the *id*. Kant’s *Groundwork for the Metaphysic of Morals* identifies the touchstone of actions with ‘genuine moral worth’¹⁰³ to be their origin in a sense of duty and most certainly not any ‘delight’ which might accompany them. Indeed, for Kant, such emotional rewards disbar the agent from any credit for his actions. However, there is

¹⁰²A view endorsed by Aquinas, in the Latin, that the virtues are ‘*voluntarie et prompte et delectabiliter, et etiam firmiter*’. (Roughly: ‘Voluntary, ready, delightful and yet enduring’). Sancti Thomae de Aquino, *Quaestiones disputatae de virtutibus, Textum Taurini* (1953) editum ac automato translatum a Roberto Busa SJ in *taenias magneticas denuo recognovit Enrique Alarcón atque instruxit*. Quaestio II [66017] *De virtutibus, q.2, a.2 co.* [online] Available at: <http://www.corpusthomicum.org/qdw2.html> [Accessed 24 May, 2010].

¹⁰³Immanuel Kant (1785) *Grundlegung zur Metaphysik der Sitten, Groundwork for the Metaphysic of Morals* [tr. Jonathan Bennett, July 2005 Last amended: September 2008] p.9 [Online] Available at: <http://www.earlymoderntexts.com/pdf/kantgw.pdf> [Accessed 24 May, 2010].

something appealing in our chronology of a medical researcher, developing in both the intellectual and the affective domains such that he eventually acquires the reliable habit of taking the right epistemic action for the right reason and delighting in doing so. (I recognise that our finding this idea ‘appealing’ would disqualify it from being a virtuous response in Kant’s eyes.) Note that at no point does our medical researcher behave in a wicked way, for this would require a vicious motive. He merely (i) allows his intellectual incontinence to compromise his epistemic acts, up to the point that (ii) his akrasia is overcome and he can be merely continent, until (iii) he eventually becomes authentically virtuous, taking the right epistemic action with relish.

Our example of the medical researcher also segues nicely into an intellectual activity identified by Zagzebski as missing from Aristotle’s account of the operations of the soul: ‘grasping the contingent’ in the theoretical realm (*VOM*, p.214). In Aristotle’s scheme, the contingent only arises in the case of the practical virtues, as the theoretical virtues concern themselves only with the necessary and eternal.

However, contemporary notions of enquiry are not so strongly linked to the unveiling of *necessary* truths. Our post-Popper notion of science, for example, is one of a weaving of webs of provisional theories, which may have to be re-spun in the light of new evidence, and not the Aristotelian contemplation of eternal verities. There is no place in Aristotle’s scheme for this notion of provisionality: to him theoretical knowledge cannot be contingent in nature. To some extent, the omission is forced upon Aristotle by his commitment to a division of the soul into rational and irrational parts and its further subdivision into (i) a section that which deals with sublunary, contingent matters and (ii) another which contemplates the necessary, eternal and invariable.

Zagzebski rightly points out, though, that Aristotle is not *ontologically* committed to a divided soul, for, as I mentioned earlier (p.54), he compares the divisions to the convex and concave aspects of a circle (*NE* bk.1, 1102a30), suggesting a picture more of unity than of partition. Zagzebski makes interesting use of this ontological uncertainty (or ‘permeability’ as I have named it) in Aristotle’s account of the division of the soul. She suggests that many moral virtues have an intellectual correlative: for example, the ‘intellectual courage’ we discussed earlier.

Flourishing as a Unifying Principle

However, her claim that the intellectual virtues are merely a subset of the moral virtues is not as convincing. In particular, her conjecture that ‘at the deepest level the moral and intellectual virtues arise from the same motivation, perhaps a love of being in general’ (*VOM*, p.167) is not adequately supported in the text. Granted, the intellectual virtue of *phronēsis* seems to be indispensable for making the right decision and acting at the behest of the right virtue, at the right point between vicious extremes, in the moral sphere. But moral considerations do not negate knowledge qua knowledge, rather than knowledge as a precursor to some moral good, and it is a commonplace observation that clever people are not always morally good, nor morally outstanding people always clever.

Zagzebski deals with this latter obvious objection in two ways. The first is by claiming that a *knowledgeable* person may well also be immoral, but that there is a higher epistemic value, namely wisdom, and that ‘it is at least surprising, perhaps even incoherent, to say that a *wise* person is immoral’ (*VOM*, p.23). To Zagzebski, the holistic, integrative character of wisdom prevents it from being misused in the way available to the mere collector of atomistic propositional knowledge. The second way is to explain that virtuous individuals are less than perfect, so it is common for them to possess some virtues to a greater extent than others: for example, someone could be kind but not courageous (*VOM*, p.156). We might visualise this as a sort of bar-chart or profile which shows the relative distribution of the various virtues in a person. So, we accept a range of strengths amongst a person’s various virtues within the moral sphere, without drawing the conclusion that some must therefore be of a radically-different type. Thus, an individual’s being low in moral virtue and high in intellectual virtue (or vice versa) does not damage Zagzebski’s thesis that all the virtues are essentially moral; it merely shows that, in the absence of perfection, differences in what we might term ‘virtue-profiles’ will obtain. Earlier, we saw that Frankena classes *aretaic* judgements as scalar (p.49). Scalar quantities have a magnitude – as opposed to binary distinctions such as deontic judgements, or vector quantities which have magnitude and direction – so an agent may be more or less virtuous on a range of virtues.

Aristotle, of course, has a more stringent requirement for virtue, but Zagzebski argues against his ‘unity of the virtues’ thesis. If we return to the *Nicomachean Ethics*, we see

that not only does Aristotle require the virtuous person to possess all the virtues fully (that is, precisely not to have a virtue ‘profile’), he also puts the *intellectual* virtue of *phronēsis* in prime position: ‘the possession of the single virtue of practical wisdom will carry with it the possession of them all.’¹⁰⁴ This is of a piece with Zagzebski’s giving *phronēsis* the key role of ‘...mediat[ing] between and among the whole range of moral and intellectual virtues’ (*VOM*, xiv), and her accepting this weakens her case for the superiority of the moral, since *phronēsis* is an intellectual virtue. Clearly there are links between the two types – the moral and the intellectual – but it seems to me that Zagzebski’s attempt to bring them all into the moral tent is unhelpful. We may think that she is guilty of a category mistake in conflating Aristotle’s two different uses of the word ‘virtue’ in this way, for the virtues of book 6 of his *Nicomachean Ethics* are to be categorised as rational not moral excellences. There are analytic advantages in demarcating the two types of virtue clearly and not blurring the boundaries any more than necessary. If some unifying feature of the Aristotelian virtues – both moral and intellectual – is sought, we need look no further than their instrumental and constitutive role in the flourishing of the individual. Zagzebski does not take this eudaimonian line, however, preferring a motivation-based approach instead. She does, though, as we saw, make the claim that the motivation underlying all of the virtues might be ‘a love of being in general’ (*VOM*, p.167), so this is at least compatible with a model premised on flourishing.

Conclusions of Chapter 1

Sosa’s and Zagzebski’s construals of epistemic virtue each have their own distinctive merits. Between them, they set the agenda for subsequent work in virtue epistemology. As we shall see, the field of virtue epistemology has also much to offer the project of education, and the two poles they represent – virtue reliabilism and virtue responsibilism – contribute to it in different ways.

Sosa’s version encourages a target-orientated consequentialist approach, in which the reliable hitting of true propositions – by using our epistemic skills and faculties – is the chief principle. His work would clearly have much appeal for technicians in the field of education. Its structural features allow an encoding in symbolic logic and, as we

¹⁰⁴ Aristotle, *Nicomachean Ethics*, 1145a3. I have replaced the translator’s version ‘prudence’ with ‘practical wisdom’, for the reasons given earlier.

shall see, the making of links with some recent work in artificial intelligence. However, this work turns out to raise questions concerning a number of assumptions underlying village technical rationality. In particular, the means-ends reasoning and the preoccupation with efficiency of such technicism are seen to lead to an oversimplified and naïve model of teaching and learning. I shall later elaborate on this (p.178) to show that too direct a targeting of true proposition p can lead to a class of propositions, $\sim p$, being inadvisedly ignored, and thus to an unvirtuous, non-creditable process of passive belief-revision with insufficient tethering either to reality or to the rest of the learner's doxastic web.

Zagzebski's variety of virtue epistemology contains a fuller description of the various epistemic virtues and vices and hence is more easily translatable than Sosa's writings into educational desiderata. Although she still endorses the truth-conduciveness requirement for epistemic virtue that Sosa's work posits, she places an emphasis on virtuous motivation and not just on reliable outcomes.

Two groups of virtues identified by Zagzebski form a starting point for two thesis chapters on aspects of intellectual virtue which are highly pertinent to teaching and learning. The first concerns the use made by epistemic agents of testimony, the related virtues being described by her as 'being able to recognise reliable authority' (*VOM*, p.114), and 'Trust is a mean between gullibility and suspiciousness' (*VOM*, p.160). The second group involves what we might term 'other-regarding intellectual virtue' – 'fairness in evaluating the arguments of others' (*VOM*, p.114) – and 'the teaching virtues – the social virtues of being communicative, including intellectual candor and knowing your audience and how they respond' (*VOM*, p.114).

We are reminded here of Sosa's injunction that we ought to '... give due weight not only to the subject and his intrinsic nature but also to his environment and his epistemic community.'¹⁰⁵ To do so would involve a consideration of the contribution that the giving and receiving of testimony and the presence of other-regarding epistemic virtue in the social world make to the amelioration of the individual's epistemic predicament. Good testifiers are important in this epistemic ecology: to be 'knowledgeable' is to be a reliable source of information, a creditable attribute, indicating the desirability of such epistemic trustworthiness to the highly social species *Homo sapiens*. I shall elaborate

¹⁰⁵ Sosa (1980) op. cit., p.160.

from these clues of Zagzebski and Sosa – which they themselves leave largely undeveloped – in the following chapters on ‘Testimony’ and ‘Other-regarding Virtue’: two epistemic features which are clearly crucial to education.

Chapter 2 - Knowledge and Testimony

Introduction

Testimony is an important source of beliefs in a large number of contexts, including that of education (even though the word does not often appear during educational discussions).¹⁰⁶ Since much that is believed by individuals has come to them not from direct experience but by accepting the accounts of others, the trustworthiness of their interlocutors' testimonies, whether these be spoken, textual or electronic in form, is an important factor in determining whether or not they acquire true, justified beliefs.

Testimonial trustworthiness is a combination of competence and sincerity, and both of these tend to be high when a teacher testifies in her area of expertise. Because, in the world beyond the classroom, there are situations in which the competence or sincerity of the testifier is low, however, it is important that the learner acquires an epistemically-virtuous, well-attuned disposition towards testimony. In this chapter, I consider ways in which untrustworthy testifying can lead the epistemic agent astray, and also defend testimony's role as an important source of knowledge.

Our knowledge is testimony-saturated to a considerable degree, including such apparently personal knowledge as our own name and date of birth, factual knowledge such as the heliocentric solar system and everyday knowledge such as the current US President being Barack Obama. Neither is apparently 'direct' experience free of testimonial influence, for experience rarely comes to us unmediated by theory (in the loose sense of the word) but is filtered and coloured by what we have already heard and read about similar things, events and phenomena. Even the most solitary scientist, gathering data in the laboratory, relies on the labels on the reagent bottles, the graduations on the meters and the periodic table of the elements on the wall. As Hume puts it:

... there is no species of reasoning more common, more useful and even necessary to human life than that which is derived from the testimony of men and the reports

¹⁰⁶ The notion of teaching as testifying is an under-explored one, to say the least. In the literature, the only significant discussion of the concept relates to Holocaust education, in which the testifier is a survivor of genocide rather than the regular teacher. One analysis draws on Levinas' distinction between a 'saying' and a 'said': 'Contemplating the accuracy and historical significance of a testimony is a response to its "said". Attending to the translative, performative moment of testimony is a response to its "saying"'. Roger Simon & Claudia Eppert (1997) 'Remembering Obligation: Pedagogy and the Witnessing of Testimony of Historical Trauma', *Canadian Journal of Education*, 22, 2, pp.175-191, p.179.

of eyewitnesses and spectators.¹⁰⁷

However, this view is at odds with much of the Western philosophical tradition, and Hume himself places several restrictions on the legitimate use of testimony, as we shall later see (p.75).

Be that as it may, this dependence on testimony is exceptionally marked during childhood and other periods of new learning, so an analysis of testifying and auditing is, I feel, particularly relevant to the virtue epistemology of education. In this chapter, I conduct such an analysis and show that attacks on testimony as a legitimate source of knowledge are ultimately self-defeating, leaving testimony in its rightful place alongside perception, memory and reasoning. Doing this shifts the centre of gravity of epistemology away from the individual knower and towards the epistemic community at large: the place where both Sosa, and particularly Zagzebski, would locate him. A picture emerges of a socially-enwebbed epistemic agent, rather than an autonomous knower, with a Quinean web of belief which does not reduce to a list of individual propositions. To identify some links with virtue epistemology and education, I view testimony through the lenses of Zagzebski's and Sosa's versions of virtue epistemology and carry out an initial examination of the relationship between testimony and one aspect of learning: acquiring a first language.

Historical and Contemporary Philosophical Stances towards Testimony

I shall first set out the critical arguments of some major figures in the Western tradition who have historically taken a dim view of testimony as a path to the truth, and then discuss the contemporary philosophy of testimony, which has largely rehabilitated it as a respectable knowledge-source. Anthony Coady's (1992) book *Testimony: A Philosophical Study*, being the first philosophical work to deal exclusively with testimony, features prominently in the latter discussions.

Plato's Dismissal of Testimony as a Knowledge-source

Plato dismisses testimony as a source of knowledge, on the whole. For example, in *Theætetus*, through the voice of Socrates, he indicts 'those paragons of intellect known

¹⁰⁷ David Hume (1748) *An Enquiry Concerning Human Understanding*, Section X, Part I, *Classics of Western Philosophy* [ed. Steven Cahn] (Indianapolis: Hackett Publishing Company Inc, 1999), p.672.

as orators and lawyers’ for ‘making people believe what they want them to believe’,¹⁰⁸ without giving them knowledge. The fact that *true belief* may on occasion be transmitted by such testimony does not convince Plato that *knowledge* too is conveyed.

In the *Republic*, he asserts that testimony does not even commonly deal with true belief, let alone full-blown knowledge. The testimony of the prisoners in the cave of book VII, for instance, is considered to be worthless, in that they mistakenly believe they are ‘naming the passing objects’,¹⁰⁹ when these ‘objects’ are in fact only flickering images on the cave wall; or they erroneously attribute the voice of a passer-by echoing from the wall to a ‘passing shadow’. Elsewhere, anticipating the sceptical doubts of Descartes (which follow from Descartes’ considering the possibility of a hallucination-producing *genium malignum*), Socrates tells Theætetus that ‘dreams and disorders, especially madness’, lead to ‘false perceptions’ and that ‘so far from it being true that what appears to any man also is, on the contrary none of these appearances is real’.¹¹⁰ If perception is not a reliable source of knowledge, for we cannot guarantee that we are awake and sane, then the second-hand deliverances of testimony seem to be even less valuable, *prima facie*.

This is of a piece with Plato’s suspicion of any earthly candidates for knowledge; a suspicion that follows from his idealist epistemology. To him the only legitimate knowledge is that of the supra-mundane Forms. Even this rarefied knowledge is out of reach of most mortals, either directly or via testimony: ‘Only a man of exceptional gifts ... will be able to see that a Form ... exists’.¹¹¹ All of this seems to add up to an unequivocal rejection of testimony-giving and testimony-receiving as justifiable doxastic processes, and indeed this is the standard characterisation of Plato’s stance by philosophers writing on testimony.

Coady, for example, labels Plato a ‘Puritan’ vis-à-vis his response to testimony. Setting aside the anachronism, we can challenge this labelling of Plato and elaborate a more nuanced view. Coady holds that, for Plato, ‘epistemic salvation lies in philosophical reflection and the contemplation of the Forms’,¹¹² and not in the

¹⁰⁸ Plato, *Theætetus*, 201.

¹⁰⁹ Plato, *Republic*, 515b.

¹¹⁰ Plato, *Theætetus*, 157e – 158.

¹¹¹ Plato, *Parmenides*, 135b.

¹¹² C.A.J. Coady (1992) *Testimony: A Philosophical Study* (Oxford: Clarendon Press) p.22.

establishment of beliefs from perception nor in their acquisition from testimony (the latter being particularly suspect). Although we can concur with Coady that this is largely the case in Plato's writings, we see, however, that there are places where perceptually-derived knowledge *is* regarded as legitimate, and passages where even testimony has an important role. The man who has actually been to Larissa can, for Plato, justly claim to *know* the way to Larissa,¹¹³ for example (in contrast to the person who judges the way correctly but has never followed that route before, and so has a true belief which falls short of being knowledge). This we recognise as a clear instance of a perceptually-sourced true belief being endorsed as knowledge by Plato.

We can also identify a pervasive performative contradiction in Plato's works that somewhat undermines his espoused opposition to testimony. The dialogues are full of details about the participants (for example, that Meno is a 'spoiled boy' and blessed with 'good looks', which Socrates 'can never resist'),¹¹⁴ leaving the reader wondering if Plato really wishes us to ignore his testimony and restrict our attention solely to that which he deems to be important: the Forms. However, by the very act of including such testimony, and not ironically undermining it as epistemically suspect, Plato is implicitly advocating its use. Furthermore, the testimony of Socrates' companions is taken seriously, and even assisted in its delivery by maieutic methods (see, for example, *Theaetetus* 149-152), to be subsequently tested by elenchus,¹¹⁵ in the hope that the dialogue will enable Socrates to acquire knowledge from testimony.

The fact that this project never reaches a satisfactory outcome but is nevertheless repeated again and again, shows not a scepticism about testimony but a confidence that if knowledge can be acquired, it will come from a robust examination of the testimony of others. Combining testimony with the rigorous exercise of reason can yield knowledge. That this is difficult is in no doubt, but Plato even allows 'someone still more remarkable [than the 'man of exceptional gifts'] to discover it *and to instruct another ...*'.¹¹⁶ The 'it' in question here is knowledge of a Form, so this is a case of

¹¹³ Plato, *Meno*, 97-97b.

¹¹⁴ Plato, *Meno*, 76b-c.

¹¹⁵ The root meaning of '*elenchus*' relates to shame according to Paul Woodruff (1998) 'Socratic Education', Amélie Rorty [ed.] *Philosophers on Education* (London: Routledge) p.29. In Socrates' case, this involved him in acting as a midwife (*maieutikos*) and then examining carefully the beliefs he had helped his companion to 'deliver', by means of a relentless, forensic questioning (*elenchus*). This would typically lead to a shamefaced admission by the companion that his putative knowledge was unfit to survive.

¹¹⁶ Plato, *Parmenides*, 135b.

knowledge of the most abstract type (but, to Plato, the only real type) being conveyed by testimony. Thus, although Plato sets the bar notoriously high for knowledge, he does not claim that its acquisition or its distribution via testimony are impossible. He does, however, require of us that we make a careful examination and attempted rebuttal of putative knowledge derived from the testimony of our interlocutors. In this respect, we can consider Plato's position to be at one end of a spectrum of approaches to testimony; the other end being occupied by those (such as Coady) who demand no such checks before accepting testimony as knowledge.

Descartes' and Locke's Dismissal

Descartes is dismissive of books which are:

further removed from the truth than the simple inferences which a man of good sense using his natural and unprejudiced judgement draws respecting the matters of his experience.¹¹⁷

He places his faith on direct access to knowledge by the individual knower's intellectual recognition of its signature of clarity and distinctness, via 'natural' acts of reasoning which are underwritten by a non-deceiving God. We are, according to Descartes, on shaky ground when we try to build upon the 'loose earth and sand' of received opinion, rather than on firm rock illuminated by the light of our own individual God-given reason. We are all at the mercy of these second-hand opinions when young, however, and this inevitability of our childhood dependence on those whom Descartes terms 'preceptors' prompts his plaintive comment that:

... it is almost impossible that our judgements can be so correct or solid as they would have been had our reason been mature from the moment of our birth, and had we always been guided by it alone.¹¹⁸

This theme of unexamined 'knowledge' gained in childhood being suspect but indispensable is an important one in contemporary discussions of testimony. Whether or not the default setting of trusting – some would say gullible – acceptance of testimony ought to continue into adulthood is a key debate in this area. Finding the right route between the Charybdis of credulity and the Scylla of suspicion is a task for an epistemically sophisticated agent.

¹¹⁷ René Descartes (1637) *Discourse on Method* [tr. John Veitch, 1902] Everyman Edition, 1946 (London: J.M. Dent), Part II, p.11.

¹¹⁸ Descartes (1637) *op. cit.*, p.11.

Despite his espoused faith in reason and his method of hyperbolic doubt, Descartes rather undermines his own project when he states his intention to adhere ‘firmly to the faith in which, by the grace of God, I had been educated since childhood’.¹¹⁹ Since this was acquired largely from the testimony of his elders and teachers, perhaps together with an innate *sensus divinitatis*, we may find such stipulated immunity from sceptical attack to be a little surprising.¹²⁰ On a more general level, if Descartes wishes us to ignore texts and make up our own minds about things by using the natural light of reason, with which we are each *individually* endowed, we might wonder what his motive is in adding another volume to the pile of books we are to disregard.

Where Plato is suspicious of testimony, seeking epistemic salvation in contemplation of the Forms, and Descartes urges us to ignore the testimony of books and be guided by individual reason alone, Locke harbours similar misgivings but places his trust in first-hand empirical examination or – in the case of ‘rational and contemplative knowledge’ – in ‘the fountain’, that is, in our own individual thoughts.¹²¹

The only testimony in which Locke has any faith is the ‘testimony’ of his senses, particularly that of sight: ‘... the greatest assurance I can possibly have ... is the testimony of my eyes’.¹²² He warns those who wish to know against the dangers of ‘lazily enslaving their minds to the dictates and dominions of others.’ Any ‘borrowed wealth’ thus acquired is ‘like fairy-money’, which has the appearance of gold but turns into ‘leaves and dust when it comes to use’. A widely-quoted dismissal of the epistemic value of testimony is Locke’s assertion that:

The floating of other men’s opinion in our own brains makes us not one jot the more knowing, though they happen to be true. What in them was science is in us but opiniatrey...¹²³

This sounds like an echo of Plato’s injunctions against accepting the word of the ‘paragons of intellect’ in the *Theaetetus*, as we heard earlier (p.68) and here too the testifier may be providing the auditor with true beliefs but not knowledge. However,

¹¹⁹ Descartes (1637), *op. cit.*, p.19.

¹²⁰ It becomes less surprising when we put this together with his deferential words about the church authorities having ‘condemned a certain doctrine in physics’ (that is, Galileo’s) and can thus read his pro-faith comments as an insurance against similar condemnation.

¹²¹ John Locke (1706) *An Essay Concerning Human Understanding* (London: Penguin Books, 1997) bk.I, ch.IV, §23.

¹²² Locke (1706) *op. cit.*, bk.IV, ch.XI, §2.

¹²³ Locke (1706) *op. cit.*, bk.I, ch.IV, §22 – 23.

Locke's strong stance against testimony needs to be set in the context of his political allegiances and agenda. The *Essay* is firmly *pro* empiricist, and *contra* both 'nativist' claims to knowledge (that is, antenatally-endowed knowledge, exemplified by Plato's theory of learning as merely remembering truths acquired during the soul's multiple flittings between the Earth and Hades [*anamnesis*]¹²⁴) and also reliance on the testimony of others. There are a number of reasons for Locke to take this line, including his expressed fears that 'blind credulity' towards 'some doctrines' might make men 'be more easily governed'.¹²⁵ Like Plato, Locke is suspicious of 'rhetoric' and 'oratory', for these, he declares, 'are for nothing else but to insinuate wrong ideas, move the passions, and thereby mislead the judgement ...'.¹²⁶ Even when the testimony is sincere, there are still dangers, for: 'Passion, interest, inadvertency, mistake of his meaning, and a thousand odd reasons, or capriccios ... may make one man quote another man's words or meanings wrong'.¹²⁷

Locke's rejection of testimony as a route to knowledge seems just as clear-cut as Plato's, but again, upon closer examination, things turn out not to be so definite. The general objection can once more be levelled, as it can against Plato and Descartes, that if we are to accept a rejection of testimony as a source of knowledge, then what, we may ask, is the author's purpose in offering his own testimony? What does he hope we shall gain by reading his works? Granted, much of these philosophical texts consists of argument and explanation, but both Plato and Locke tell anecdotes which we must ignore and which they must excise on pain of incoherence. For, if they want to show that testimony is worthless as a source of knowledge, they should take care to exclude any testimony from their own works, unless this is intended merely for ornamentation and not for serious knowledge-conducive purposes.

It is clear, however, that Locke does in fact accept testimony, provided that it comes from sources of which he approves.¹²⁸ For example, to illustrate a thesis about personal identity, he offers a little vignette concerning a parrot which, towards the end of a

¹²⁴ Plato, *Meno*.

¹²⁵ Locke (1706) *Essay*, bk.I, ch.II, §24. These 'doctrines' which allegedly lead to subjugation, I take to be Catholic orthodoxies, given Locke's opposition to James II and support of William of Orange. Indeed, Locke excoriates the 'intelligent Romanist' for being 'prepared easily to swallow ... against ... the clear evidence of his senses, the doctrine of *transubstantiation*'. Locke (1706) *ibid.*, bk.IV ch.XX §10. Italics in original.

¹²⁶ Locke, (1706) *ibid.*, bk.III, ch.X, §34.

¹²⁷ Locke (1706) *ibid.*, bk.IV, ch.XVI, §11.

¹²⁸ These sources turn out to be non-Catholic, and preferably Royalist too.

remarkably human-like conversation, answered a Prince's question, "*Vous gardez les poules?*" with the reply, "*Oui, moi et je sais bien faire*", and then, 'made the chuck four or five times that people use to make to chickens when they call them'.¹²⁹ The source of Locke's quotations is Sir William Temple,¹³⁰ who in turn claimed to have heard the story from a Prince Maurice, who had translated the parrot's speech into French from the parrot's original 'Brazilian' language via a 'Dutchman that spoke Brazilian ... and ... a Brazilian that spoke Dutch.' Despite the implausibility of this testimony in itself, exacerbated by the long testimonial chain involving four languages, Locke nevertheless takes it seriously, since 'we have a Prince's word for it'. Similarly, in response to Edward Stillingfleet, the Bishop of Worcester's, questioning of the credibility of some of his sources, Locke assures the Bishop 'that he whom I relied on for his testimony concerning the Hottentots of Soldania, was no less a man than an Ambassador from the King of England to the Great Mogul'.¹³¹

So, although Plato, Descartes and Locke pursue individualist agendas vis-à-vis knowledge – which we can characterise to a first approximation as egocentric idealism, egocentric rationalism and egocentric empiricism respectively – they are unable to dispense entirely with an acceptance of some use of testimony, grudging though this be.

Hume's Endorsement

Hume, on the other hand, is often portrayed as a philosopher who takes an opposing view to the general suspicion of testimony that Plato, Descartes and Locke typify. We saw this in the Hume quotation earlier in this chapter, in which reasoning based on testimony is claimed to be common, useful and necessary (p.67). However, two aspects of Hume's endorsement of testimony as 'necessary' ought to be noted. The first is that he considers our reliance on testimony to be merely a *practical* necessity, having in fact only a probable, contingent relationship to the truth, not a 'necessary' one in the modal sense of the word. The principle upon which trust in testimony is founded is, according to Hume, of an inferential nature, for we draw upon our

¹²⁹ Locke (1706) *Essay*, bk.II, ch.XXVII, §8.

¹³⁰ MP for Carlow, Ambassador to The Hague, and friend of William of Orange, according to the name database, NNDB [online]. Available at: www.nndb.com [Accessed 10 March 2009]. The Prince in Temple's story is Maurice of Nassau, another Prince of Orange, after whom Mauritania was named by Dutch explorers.

¹³¹ Locke (1706) *op. cit.*, Appendix, Note B: Reference at I.iv.8.

experience to hypothesise a ‘constant and regular conjunction’ between ‘facts’ and ‘the reports of witnesses’.¹³² It is not an a priori principle but a theory of human nature based on the empirical observation of regularities, and it is subject to a number of contra-indications which properly undermine our confidence in testimony in certain situations. These warning signs include a hesitant delivery of testimony by the testifier, or, at the other extreme, too forceful an affirmation. The character of a particular testifier needs also to be evaluated, as does the possibility of her having ‘an interest’ which compromises the sincerity of the testimony.

For all his talk of the usefulness and necessity of testimony, Hume is pessimistic about the reliability of testifiers, complaining about the ‘bigotry, ignorance, cunning and roguery of a great part of mankind’.¹³³ This, however, is part of his thesis that ‘no testimony is sufficient to establish a miracle, unless the testimony is of such a kind that its falsehood would be more miraculous than the fact which it endeavours to establish’; so the presumption *against* the testifiers is higher here than in more quotidian cases. Hume discusses, for example, a putative miracle involving a cathedral doorkeeper who, ‘wanting a leg’, rubbed his stump with holy oil and was rewarded with a ‘true natural leg’. Testimony that this actually happened is then taken as *prima facie* evidence for the testifiers’ possessing the vices that Hume lists (bigotry, ignorance and so on). Showing an even-handedness in his treatment of the ‘Romanist’ and ‘Mahometan’ faiths, he further asserts that ‘when we believe any miracle of Mahomet or his successors, we have for our warrant the testimony of a few barbarous Arabians’.¹³⁴

Hume is also critical of the widespread sloppiness afflicting the auditors of testimony. For example, he identifies the bad habit amongst country dwellers of spreading ‘intelligence’ about the impending marriage of two young people when they had merely been seen together twice, and in the light of this he awards ‘the populace’ the epithet ‘*avidum genus auricularum*’.¹³⁵ Despite these caveats, he does, unlike Plato, Descartes and Locke, freely accept testimony as a source of evidence for belief-formation, provided that one ‘proportions [one’s] belief to the evidence’.

¹³² Hume (1748) op. cit., Section X, Part I, p.672.

¹³³ Hume (1748) op. cit., section X, part II, p.677.

¹³⁴ Hume (1748) op. cit., section X, part II, p.676. Hume also refers to the authors of the *Pentateuch* (ie Genesis, Exodus, Leviticus, Numbers and Deuteronomy) as ‘barbarous and ignorant’, and talks of the ‘mummeries’ of Catholicism.

¹³⁵ ‘Gossip-hungry race’.

It is important to note the difference between Hume, who sees testimony as *evidence* that can be used in doxastic processes, and other more recent rehabilitators of testimony as epistemically legitimate (such as Coady), who place it alongside perception as a direct source of *knowledge*, not as *evidence* which is inferentially processed further and may eventually become knowledge. This evidence-processing, which Hume's reductionist¹³⁶ analysis requires, includes having regard both to one's immediate observations of the testifier's behaviour – keeping alert for signs of untrustworthiness – and to the wider evidence of our background set of beliefs. A failure of testimony to cohere with our pre-existing belief fabric – to draw on Quine's more recent analysis¹³⁷ – encourages us to cast doubt on its veracity. Quine's principle of 'minimum mutilation' of our web of beliefs in the face of recalcitrant *experience*, suggests that we make the smallest possible adjustments which enable the new experience to be accommodated while leaving the web largely intact. Recalcitrant *testimony*, however, is not always strong enough to mutilate our webs at all, and may well be rejected on the grounds that we feel that the testifier is likely to be mistaken or insincere. On this point, Hume tells an anecdote involving an Indian prince's response to testimony about frosty weather: but Locke had published a similar account over forty years earlier which illustrated the point more clearly. In his version, a Dutch ambassador tells the King of Siam that the water in Holland freezes in the winter such that it would bear the weight of an elephant. According to Locke, the king replied: 'Hitherto I have believed the things you have told me, because I look upon you as a sober fair man, but now I am sure you lie'.¹³⁸ Within the world-view of the Siamese king, such a described phenomenon did not cohere with the regularities he had hitherto observed in his own kingdom, hence was either to be placed in the category of the miraculous or the fraudulent – and by plumping for the latter he suffered no mutilation of his web of beliefs.

¹³⁶ 'Reductionist' in that our justification for relying on testimony in some circumstances reduces to our own individual powers of observation and inference. By checking that testifier *t* has hitherto been reliable on things which we could personally check, we then ascribe future reliability to *t*'s eyewitness accounts, provided that she neither testifies to something miraculous – or otherwise at odds with our belief-set – nor behaves in ways which alert us to the possibility of insincerity. Some writers use the alternative form 'reductivist' (eg Welbourne, 2002). I explore the key differences between reductionists and anti-reductionists on p.83.

¹³⁷ W.V.O. Quine (1961) 'Two Dogmas of Empiricism' section 6 in *From a Logical Point of View*, reprinted in Louis P. Pojman (2001) [Ed.] *Classics of Philosophy: the Twentieth Century* (Oxford: Oxford University Press), p.221.

¹³⁸ Locke (1706) *Essay*, bk.IV, ch.XV, §5.

Besides this view of testimony as highly defeasible, an aspect to consider is the permitted length of the testimonial chain. For Hume, the useful and necessary type of testimony is restricted to ‘reports of eyewitnesses and spectators’.¹³⁹ There is a similar legal tradition of the inadmissibility of any type of testimony other than the first-hand (a principle which excludes ‘hearsay’ evidence, for example), an issue to which I shall later return (p.78). When an eyewitness attempts to track the truth and testify to these findings, issues of reliability are always potentially important to the auditor, particularly in Hume’s inductivist construal of belief-formation from testimony. But when the tracking is by means of looking over the shoulder of another tracker – so to speak – the quarry may prove to be more elusive than ever and the testimony less trustworthy. ‘[A]ny testimony, the further it is from the original truth, the less force ... it has ... Each remove weakens the force of the proof’, as Locke puts it.¹⁴⁰

This stance seems correct but is ultimately untenable. One objection is that our expert guide might well enable us to spot quarry which our untutored eye would have missed, so having an expert at the beginning (or even elsewhere) in the chain could strengthen rather than weaken the force of the testimony. There may be differences in doxastic competence in the particular circumstances, which may render a direct eyewitness account of an event *less* useful as a source of evidence for the next auditor in the chain than a longer chain of higher competence (to continue with Hume’s reductionist/inductivist model for the moment). For example, on a recent flight back from a conference in Lithuania, I saw another passenger jet pass under the aircraft on which I was travelling. It seemed to me that it approached us at right angles and flew under our aircraft, at perhaps 50m vertical separation. On raising this with a flight attendant, she later reported that the Captain said that he had seen the aircraft on his radar and that, according to him, it had crossed our path in compliance with the aviation safety rules (1000 feet minimum vertical separation: approximately 300m). Despite the fact that my account has reached the reader as eyewitness testimony, with one testifier and one auditor,¹⁴¹ it is *inferior* to the second account although the latter comes from a longer testimonial chain:

(Captain → flight attendant → passenger/final-testifier → auditor).¹⁴²

¹³⁹ Hume (1748) *Enquiry*, section X, part I, p.672.

¹⁴⁰ Locke (1706) *op. cit.*, bk.IV, ch.XVI, §10.

¹⁴¹ Keeping the same terminology, even though the ‘auditor’ in this case is the present reader.

¹⁴² The arrows here indicate the flow of testimony, not my earlier meaning of material implication.

The difference is that I am not competent to pronounce on the distances between fast-moving aircraft, while a trained Lufthansa pilot is.

We see another, related, principle at play in the case of historiography. A historical work which uses the eyewitness reports of a large number of participants in a particular event, combined with chronicles, records, documentary evidence and so on, is in some sense superior to the testimony of any one of the individuals, and indeed to the direct experience of one who was in the fray. It does not trump the phenomenological experience of being there, of course, but as a source of propositional knowledge it is often of greater value.

There is thus no requirement for teachers to be ‘eyewitnesses and spectators’ of the events and phenomena about which they testify, for they can add their expertise to a longer testimonial chain and render it more valuable to learners than it would otherwise have been. Having said this, we recognise that, say, the Physics teacher who has actually measured the speed of light can testify about its value with more authority than the one who merely quotes the textbook, even though both teachers are highly dependent on the testimonial webs of science.

Legal and Natural Testimony

Traditional accounts of testimony typically either cast doubt upon it, or simply do not allow for the possibility of its ability to carry knowledge to the hearer. As we saw earlier (p.68), this is no surprise in the case of Plato, for whom even direct perception, experienced first-hand by the individual, does not guarantee the acquiring of knowledge. One of the groups he sarcastically refers to as ‘paragons’ – the lawyers – has a special relationship to testimony in that an important part of their work is either affirming or casting doubt upon the credibility of witnesses, depending on the side by whom they are paid to appear. The jury too has particular obligations to assess the testimony of the various parties for credibility and to weigh up the balance of probabilities of their veracity. In this situation, the simple acceptance of the uncorroborated word of a stranger will not do.

The importance of legal testimony goes beyond the epistemic, in that the defendant's liberty – or even life, in a number of jurisdictions – is to some extent at the mercy of the testimony of others. Traditions have thus evolved which attempt to reduce the likelihood of unreliable testimony being uttered or heeded. The solemn appearance of the courtroom and the swearing of oaths are intended to convey to testifiers the gravity of their role. In the giving of legal testimony, it is normally required that the testifier be physically present in the courtroom,¹⁴³ and this carries the corollary that hearsay evidence is inadmissible in many jurisdictions. The reason for this prohibition is that absent witnesses can neither be sworn in nor cross-examined in person, so their testimony is free of the sincerity-conducive influences of the solemn surroundings, oaths and close questioning. The very word 'testimony' carries with it the implication of severe punishment for lying. Oaths used to be sworn on the male genitals (*L. testis*) by the witness (also *L. testis*), with the implied threat of castration for perjury.¹⁴⁴

In contrast to the particularly demanding practices of giving legal testimony or making solemn promises is that of 'natural testimony', in which the seriousness of guarantee, number of permissible links to first-hand experience and level of sceptical scrutiny are more relaxed. A paradigm case of natural testimony is not the giving of evidence under oath, but the giving of directions – to Larissa say – to a lost visitor. In providing this help, we affirm neither that we speak the truth on pain of castration, nor that we know the way first-hand and independently of any hearsay (from a map, for example). We simply do what we can to alleviate the epistemic predicament of a fellow human being. In turn, the visitor assumes that we are both competent to give directions and sincere in our intention to guide him to the best of our knowledge, and so acts on the basis of our testimony.

After our earlier discussions of hyperbolic doubt, the possibility of wholesale deception by a *genium malignum*, and the use of Socratic elenchus or courtroom cross-examination to put putative knowledge to the test, this simple acceptance of the word of a stranger can be interpreted as showing a refreshing level of trust. Another reading of the transaction, though, is that the auditor is being indefensibly gullible. Even if the more outlandish truth-obstructing possibilities are removed from consideration, it is

¹⁴³ There are exceptions to this, for example the use of video-links to a witness whose appearance in court is problematic for some reason.

¹⁴⁴ Thomas G. Gutheil *et al.* (2003) 'The Whole Truth Versus The Admissible Truth: An Ethics Dilemma for Expert Witnesses' *J. Am. Acad. Psychiatry Law* 31: pp.422-427.

still very much the case that the testifier could be insincere, incompetent, or both (although this last possibility may sometimes give rise to a Gettier-style cancellation, luckily yielding true belief). Additionally, the possibility of the auditor misunderstanding the testimony is often present. The tracking between the ‘facts of the matter’ and the beliefs finally acquired by the auditor through testimony is typically mediated by a number of links, any one of which could be faulty. If the auditor is to acquire true beliefs – or, better still, true, justified beliefs – the testifier must be ‘trustworthy’: a success-term composed, as we saw earlier, of competence and sincerity. A felicitous piece of testimony will emerge from a testifier who is in a position to know *and* is willing and able to report his knowledge sincerely. If there is subsequent uptake by the auditor, the knowledge-conducive doxastic process is complete. A fully-developed virtue epistemology will need to address this question of testifier-trustworthiness, and to explore the virtues which govern both testifying and auditing.

Proper Trust in Testimony

Linda Zagzebski, in furthering her thesis of unifying the intellectual and the moral virtues, suggests that our stance towards testimony has not only epistemic but also moral importance, for, in everyday life, ‘... we blame a person who ... ignores the testimony of reliable authority’.¹⁴⁵ In keeping with her being a (neo)-Aristotelian, though, we see that she also proposes a vice at the other extreme: ‘... the unreflective acceptance of the opinions of others.’¹⁴⁶ There is thus a happy medium between obtuseness and gullibility, at which the virtuous epistemic agent ought to aim when receiving testimony. Miranda Fricker’s labelling of this mean between the two vices is ‘reflexive critical openness’, a virtue which enables us to avoid what she terms ‘epistemic injustice – that is, failing to believe people when they ought to be believed, but also believing someone who ought not to be believed’.¹⁴⁷ These are injustices to *knowledge*, in that what we might term a ‘false negative’ deprives us of the possibility of adding justly to our set of true beliefs, while a ‘false positive’ allows us unjustly to form a belief which is not true. They are, moreover, unjust to *persons*, for disbelieving

¹⁴⁵ Linda Zagzebski (1996) *Virtues of the Mind* (Cambridge: Cambridge University Press), p.5.

¹⁴⁶ Zagzebski (1996) p.305.

¹⁴⁷ Miranda Fricker (n.d) in S.E. Marshall (2003) ‘Epistemic Injustice: The Third Way?’ *Metaphilosophy*, vol.34, nos.1/2, p.176.

the competent and sincere testifier is a type of unjustified punishment, which, if recognised, is hurtful to members of a knowledge-sharing social species such as ours.

There are circumstances in which epistemic justice and moral duty clash, such as the mothers who ‘have to believe their child’s claims of innocence, for their child’s sake’.¹⁴⁸ We note that this belief is not for truth’s sake, but for loyalty’s sake, so this is not a case of epistemic ‘critical reflexive openness’, in that the *critical* element is absent. Whereas in the legal context the default position ought to lie nearer to the ‘suspicion’ end of the continuum, when it comes to social settings, ‘gullibility’ is often a more fitting response.¹⁴⁹

Whilst Ernest Sosa does not directly address the issue of reliability vis-à-vis testimony, his notions of ‘safety’ and ‘sensitivity’ are pertinent here. Accepting the testimony of a hitherto-trustworthy source is a relatively safe – and hence epistemically-virtuous – doxastic process which is not undermined by considerations of sensitivity. As discussed earlier (p.28), the device of hyperbolic doubt can almost always be used to nullify apparently well-sourced knowledge-claims – showing them to be insensitive – but the relevant beliefs can still be considered safe, despite their lack of sensitivity to outlandish possibilities (including the formerly-reliable testifier – or auditor – being temporarily under the influence of a *genium malignum*).

What still needs attention, though, is (i) how the epistemic agent comes to regard a testifier as reliable in the first place and (ii) how the epistemic agent would maintain confidence in the testifier in a range of ‘normal’ contexts. Here, we may gloss the notion of ‘normal’ as ‘in a number of close possible worlds’, or ‘for excursions into possibility space well short of implausible sceptical scenarios such as those controlled by an evil demon’. As we have seen, Hume answers (i) and (ii) by recourse to induction from constant conjunction. There are a number of objections which can be raised against Hume’s inductivism, including the paucity of direct – that is, non-testimonial – evidence with which to check the large number of testimonially-derived beliefs we typically hold. Coady accuses Hume of being ‘involved in a vicious

¹⁴⁸ Marshall (2003) op. cit., p.176.

¹⁴⁹ In the case of the mothers above, a more robust *epistemic* process might unhelpfully reveal their children’s guilt. There are some things it is better not to know. Here we see a clash between epistemic and moral virtues, in which the mother’s epistemic duty to truth is trumped by her moral duty to her child. A similar consideration affects defence lawyers, whose job becomes more difficult if they come to realise that their clients are in fact guilty as charged.

circularity'¹⁵⁰ when he allows our induced knowledge of a constant conjunction between testimony and experience to be communal knowledge – that is, a type of knowledge itself reliant on testimony – rather than confining it to the individual agent. If it is restricted to the individual, the project of attempting to check even a fraction of one's testimonially-based beliefs against direct experience strikes us as being a hopeless one. We may also feel that there also remains the question of how a developing person's epistemic project gets off the ground in the first place, given the intertwined nature of language-acquisition and the growth of propositional knowledge in the individual.

Language Learning and Testimony

A very young child typically displays a gullibility towards pronouncements by adults, as a consequence of his inexperience as a knower – in particular, his lack of other reference-points with which to triangulate this testimony. To exemplify this, let us examine the case of first language learning. The initial entry-point into a language for a learner has historically been considered to be through the process of 'ostension'. We first acquire vocabulary by building mental associations between words and objects, and these connections are made possible by seeing competent speakers indicate an object – in one way or another – and simultaneously hearing them utter its name. Thus a link is formed in our minds. This labelling process – so the 'ostensive' theory claims – is the foundation for all subsequent learning of the language. St. Augustine is credited with first defining learning by ostension, in his retrospective description of his own first language learning as a young child in Roman North Africa:

When they (my elders) named some object, and accordingly moved towards something, I saw this and grasped that the thing was called by the sound they uttered when they meant to point it out [*ostendere*].

Augustine (398 CE) *Confessions*, bk.I, ch.8.¹⁵¹

There are philosophical and empirical problems with Augustine's account of learning from testimony in this ostensive fashion, however. Augustine compares the child learning his mother tongue to being a stranger in a foreign land: already in possession of some sort of language, just not the one spoken by the natives. Numerous ostensive

¹⁵⁰ Coady (1992) op. cit., p.81.

¹⁵¹ Translated by Wittgenstein. Ludwig Wittgenstein (1953) *Philosophical Investigations* [tr. G.E.M. Anscombe] (Oxford: Blackwell, 2001), p.2.

acts by his elders allow the child to construct a mental table of linguistic equivalences and thereby become proficient in the ‘new’ language. Ludwig Wittgenstein identified a weakness in this model of language learning by showing the implausibility of children already being in possession of their own internal private language *before* being exposed to external linguistic stimuli in the ostensive way described by Augustine.¹⁵²

If it is accepted that at this stage the child is coming fresh to these linguistically-framed beliefs (that is, precisely not by triangulating them with the now-discredited pre-existing linguistic and conceptual framework of Augustine’s ‘stranger in a foreign land’), then it is clear that he has little option but to be gullible and accepting. His initial learning will suffer from the vice of being derived from ‘... the unreflective acceptance of the opinions of others’,¹⁵³ but it seems to me that it cannot be otherwise. Propositional knowledge by its very nature needs encoding in language, and the elements of this language can only *initially* be acquired uncritically. This enables the child’s first linguistic and conceptual frameworks to be constructed: frameworks which can later be used to test the plausibility of further testimony.

The initial lack of epistemic virtue in the child’s early learning is congruent with the Aristotelian view that the virtues have to be acquired by experience. This leads us back to the question as to what constitutes a *mature* and intellectually-virtuous approach towards testimony, an approach which avoids the extremes of the both the naïve child’s ‘unreflective acceptance’ of others’ opinions and the obdurate adult’s ignoring of reliable authority. To avoid the vice of unreflective acceptance, there needs to be some sort of process by which the mature receiver of testimony comes to a judgement about the trustworthiness of the testifier. However, this test for trustworthiness must not set the bar so high that no testifier could leap the hurdle, nor must it impose unreasonable demands on the receiver in terms of unduly time-consuming and comprehensive, conscious checks of the testifier’s fitness as a reliable authority.

Auditing of Testimony: Reductionists vs. Anti-Reductionists

The debate about where the bar ought to be set is largely between two groups of epistemologists, who can be characterised as (i) reductionists and (ii) anti-reductionists.

¹⁵² Wittgenstein (1953) *op. cit.*, pp.2-10 sets out his main arguments.

¹⁵³ Zagzebski (1996) *VOM*, p.305.

These are schools of thought about testimony which have their roots in the work of two eighteenth century Scottish philosophers: David Hume and Thomas Reid, respectively. Hume, we recall, requires the testifier to have shown reliability before he will accept his word, whereas Reid has a default faith in the testifier unless there is reason to doubt him. As Reid puts it: ‘There is a much greater similitude than is commonly imagined, between the testimony of nature given by our senses and testimony of men given by language’.¹⁵⁴ The overall position of the two opposing camps is succinctly put by Leslie Stevenson:

... the criterial approach [i.e. that of the anti-reductionist] treats testimony as “innocent” (i.e., trustworthy) unless shown guilty; the reductionist treats it as “guilty” (i.e., not worth of belief) until a good track record is shown.¹⁵⁵

The reductionists seem, *prima facie*, to have the most tenable position, in that they require testimony to be supported by some non-testimonial buttressing before it can be accepted. They can discern no *a priori* warrant for simply accepting something on another’s say-so, but demand the individual auditor to have internally-available justification for the testimony from ‘on-board’ resources such as perception, reasoning and memory. However, ‘global’ reductionism is an impracticable project, for it would require the auditor to suspend assent to every belief tainted by testimony until the veracity of each piece of testimony could be established independently, using only the auditor’s perception, reasoning and memory. As our earlier discussion of language learning in childhood shows, the process of induction into a testifying and auditing community could not even get off the ground without an initial period of simple acceptance of testimony received by the novice. Being inducted into what Wittgenstein terms ‘a form of life’ requires credulity:¹⁵⁶ ‘For how can a child immediately doubt what it is taught? That could mean only that he was incapable of learning certain language games’.¹⁵⁷

From the perspective of the global reductionist, the child could not justifiably gain initial purchase on testimonially-derived knowledge, and would thus be barred from access to all knowledge framed in language. Nevertheless, in adulthood, so the

¹⁵⁴ Dugald Stewart (1813) *The Works of Thomas Reid, DD, FRS, Edinburgh* (Charlestown: Samuel Etheridge jun’r). [Digitised by Google Books] p.380.

¹⁵⁵ L. Stevenson (1993) ‘Why believe what people say?’, *Synthese*, 94, p.436.

¹⁵⁶ The word ‘credulity’ has nowadays taken on a pejorative meaning, but Reid treats it as a virtue and I use it here in his sense.

¹⁵⁷ Ludwig Wittgenstein [*Über Gewissheit*] [tr. and ed. G.E.M. Anscombe, G.H. von Wright & Denis Paul] (1951) *On Certainty*, (Oxford: Basil Blackwell) §283 [online] Full text available at <http://budni.by.ru/oncertainty.html> [accessed 6 Sep 2010].

reductionists argue, it *is* legitimate to seek justification for the acceptance of individual pieces of testimony: a requirement characteristic of ‘local reductionism’. This latter version of reductionism is also labelled ‘inductivism’, because claims to knowledge derived from testimony are seen to receive inductive support from what we already know, combined with what we have discerned about the reliability of particular testifiers. If a piece of testimony resonates well with our existing beliefs and the testifier has a good epistemic track record as far as we can see, then we are justified in forming a belief based upon it. This forms the basis of an a posteriori default rule:

If a speaker S asserts that p to the hearer H, under normal conditions, then it is proper and correct for H to accept S’s assertion, unless H has special reason to object.¹⁵⁸

The rule is a posteriori to reductionists in that it is invoked after appropriate experience which enables both the ‘normal conditions’ and the ‘special reason to object’ to be defined inductively, and to be consciously known by the auditor.

The anti-reductionists, in contrast, treat the acceptance rule as a priori. An individual auditor is justified in accepting testimony from an arbitrary testifier without having any internally-available evidence to bolster it. This approach looks, on the face of it, to be unduly permissive, but Tyler Burge has developed supporting arguments involving presuppositions essential for communication, and Coady makes use of what we recognise to be a transcendental argument (although Coady himself does not label his approach thus). These provide externalist justification for the a priori acceptance of testimony: justifications of which the auditor need not be aware.

Transcendental arguments, particularly of the type developed by Immanuel Kant, show that certain conditions must be met in order for us to have experience of objects. Since we *do* have experience of objects, these conditions are themselves necessary. As Kant puts it in the first *Critique*, ‘I entitle *transcendental* all knowledge which is occupied not so much with objects as with the mode of our knowledge of objects in so far as this mode of knowledge is to be possible a priori’.¹⁵⁹ In order to answer the question of how mathematics and science are possible, Kant shows that the alternative to

¹⁵⁸ Thomas Uebel (2009) ‘Neurath’s protocol statements revisited: sketch of a theory of scientific testimony’, *Studies in History and Philosophy of Science*, vol.40, iss.1, pp.4-13, p.5. He based this formulation on J. Adler (2006) ‘Epistemological problems of testimony’ in E.N. Zalta (ed.) *Stanford Encyclopedia of Philosophy*.

¹⁵⁹ Immanuel Kant (1787) *Critique of Pure Reason* [tr. Norman Kemp Smith, 1929] (Basingstoke: Palgrave) B25/A12, p.59.

scepticism (that is, to the claim that the deliverances of mathematics and science do not amount to knowledge) is to take their legitimate existence as a starting point:

Since these sciences actually exist, it is quite proper to ask how they are possible; for that they must be possible is proved by the fact that they exist.¹⁶⁰

This is the same overall strategy as that adopted by Coady in his defence of an a priori warrant for testimonially-derived knowledge (although, again, he does not himself make the link with Kant's approach). Like Kant, he proposes a form of positive¹⁶¹ epistemology, which 'takes it that the challenge of scepticism is ... overcome ... and proceeds to investigate the structure ... to be found in human knowledge...'.¹⁶² In essence, his argument sets out to show that testimony must convey knowledge, because much of our knowledge is only possible via testimony. One line of Coady's multiple-pronged transcendental argument is of a Davidsonian nature:

We must apply a principle of charity (or some similar interpretive maxim) in interpreting the speech of others ... so that agreement is maximized or optimized amongst us and them. We must, that is, find their expressed beliefs mostly correct by our lights.¹⁶³

In order to make sense of testimonial utterances, we have to assume that these are based on the testifiers' perceptions of the world and that this is the same, shared, world with which we ourselves are familiar. Faulty perception and confusing or insincere testimony have to be the exception rather than the rule, for 'Global confusion, like universal mistake, is unthinkable, not because the imagination boggles, but because too much confusion erodes the background of true beliefs against which alone failure can be construed'.¹⁶⁴ There can be no counterfeit coins without real coins and, likewise, false testimony only makes sense against a background of largely true testimony, for meaningful communication cannot even begin to take place without widespread agreement about everyday facts, encoded in sincere testimony. The upshot of this is the 'acceptance principle' which forms the main thesis of Coady's book. Tyler Burge

¹⁶⁰ *ibid.*, B20/21, p.56.

¹⁶¹ Not of course 'positivist' epistemology; the term 'positive epistemology' is intended as a contrast to negative epistemology which concerns itself with refuting the sceptic.

¹⁶² Coady (1992) *op. cit.*, p.3.

¹⁶³ Coady (1992) *op. cit.*, p.157. Here he is summing up some of Donald Davidson's thoughts on the matter, drawn from a number of works, both early and later.

¹⁶⁴ Donald Davidson (1980) 'Mental Events', *Essays on Actions and Events* (Oxford: Oxford University Press), p.221 in Catherine Z. Elgin (2002) 'Take It from Me: The Epistemological Status of Testimony', *Philosophy and Phenomenological Research*, vol.65, no.2, p.296.

puts this principle elegantly (although his justification for this is not the transcendental argument favoured by Coady but an ‘intrinsic rationality’ route):

In interlocution we have a general a priori prima facie (pro tanto)¹⁶⁵ entitlement to rely on seeming understanding as genuine understanding. And we have a general a priori prima facie (pro tanto) entitlement to believe putative assertions that we seem to understand. These are two rational default positions.¹⁶⁶

Testimony as Important as Perception, Memory and Reasoning

Coady specifies the conventions associated with the ‘speech act’¹⁶⁷ of ‘natural testimony’¹⁶⁸ to be as follows:

A speaker *S* testifies by making some statement *p* if and only if:
(1) His stating that *p* is evidence that *p* and is offered as evidence that *p*
(2) *S* has the relevant competence, authority or credentials to state truly that *p*
(3) *S*’s statement that *p* is relevant to some disputed or unresolved question (which may or may not be, *p*?) and is directed to those who are in need of evidence on the matter.¹⁶⁹

If we now apply this to the question we derived earlier from the *Meno* – “Is this the road to Larissa?” – then the conventions govern the testifier *s*’s speech act of answering “Yes” (i.e., to our question “*p*?”, he expresses assent). As long as he has followed these conventions, then we can take his testimony as evidence that this is indeed the way to Larissa, assume that he is in a position to know the way to Larissa and construe his answer as a helpful act which can clear up our doubts. As long as *S* follows the conventions of this speech act, we can *know* ‘that *p*’ from his assertion “that *p*”. It should be noted that the word ‘evidence’ in Coady’s formulation does not imply mere input to a Humean inductive process (like scientific evidence being used to construct a theory) which later *indirectly* yields knowledge after weighing this, and other, evidence in the balance and drawing inferences from it, but a *direct* source of knowledge (as in ‘the evidence of my own eyes’). Testimony is thus, to Coady, a *sui generis* doxastic source, alongside, and on all fours with, perception, memory and reasoning. As a source of knowledge, the auditor can incorporate it more directly into his web of beliefs than a piece of Humean evidence that has to be first processed inferentially.

¹⁶⁵ *Pro tanto*: L. ‘To a certain extent’: in this case, ‘in the absence of defeaters’.

¹⁶⁶ Tyler Burge (1993) ‘Content Preservation’, *Philos. Rev.* 102, pp.457-488 in Steffen Borge (2003) ‘The word of others’, *Journal of Applied Logic*, 1, p.110.

¹⁶⁷ This definition is restricted to spoken testimony, so does not apply to other testimonial vehicles, such as the written word (which are sometimes labelled ‘extended testimony’).

¹⁶⁸ This excludes legal testimony – which Coady terms ‘formal testimony’.

¹⁶⁹ Coady (1992) *op. cit.*, p.42.

However, if we apply it to the Larissa example, we might feel that a weak point in this analysis of testimonial transactions is the requirement that *S* does in fact abide by the conventions that Coady proposes. A Humean analysis of our epistemic predicament as strangers in a foreign land asking a passer-by for help would point out our lack of opportunity to build up a picture of the trustworthiness of the testifier (by the induction of a rule expressing a constant conjunction between (i) the testifier's expressions of local knowledge and (ii) the topographical facts of the matter, as evidenced by our direct perception of them). Under these circumstances, and in the absence of any other sources of advice, we would be forced to take the testimony of the stranger on trust. Coady, however, sees the trust we place in testimony not as a last resort, but as 'fundamental'.¹⁷⁰ He attributes to it equal standing with the perceptual and the mnemonic as a key doxastic process. This does not mean that testimony is infallible, any more than our senses and memory are infallible, but it does elevate it to the status of a practice giving us direct access to knowledge, rather than the traditional view of a second-rate, second-hand, inferential and indirect doxastic process (as advanced by Hume). In just the same way as we routinely trust the deliverances of eyesight if we have no grounds for suspecting optical illusions and the like, so too can we accept testimony at face value if we have no grounds for suspecting deception or mistake. This may strike one as licensing gullibility, but Coady is determined to follow through the implications of putting testimony on the same footing as perception.

Safety and Sensitivity of Testimony

Even if the auditing of unsupported testimony is accepted as a fundamental doxastic process, the gullibility charge still needs to be dealt with. Coady claims that 'there is no question of our being gullible' when we take a testifier's words as a direct source of knowledge, for 'we may simply recognise that the standard warning signs of deceit, confusion or mistake are not present'.¹⁷¹ This, then, invests the assumption that testimony is trustworthy with the status of a default condition, while accepting the possibility of over-riding defeaters, rather than that of an unbreakable rule. There are limits to credulity.

¹⁷⁰ Coady (1992) op. cit., p.46.

¹⁷¹ Coady (1992) p.47.

To explore this further, let us take it that insincerity can reliably be detected in the case of a particular testifier: Pinocchio. This will act as a limiting case, the other extreme being a testifier whose sincerity we are completely unable to judge. To make the model even simpler, Pinocchio can only answer “Yes” or “No” to any questions put to him. This allows us to track Pinocchio’s beliefs reliably. We know that he is sincere as long as his nose does not grow, so when his nose does grow we can simply invert his answer to arrive at his actual belief. In Sosa’s terms, our beliefs about Pinocchio’s beliefs are both safe and sensitive. They are safe in that we correctly believe Pinocchio when it is the case that he is answering sincerely, and they are sensitive in that were we to be mistaken in believing that he is speaking sincerely, we would quickly become aware of our mistake by the tell-tale sign of his nose getting longer. Thus we can accept his testimony as a default, for the warning signs to indicate mendacity are unmistakable.

Unfortunately, this safety and sensitivity to Pinocchio’s testimony only relates to his *beliefs* and does not extend as far as knowledge, so in this sense his testimony is not necessarily trustworthy, even when we compensate for any nose-lengthening.

Trustworthiness incorporates both sincerity and competence, so although we have full knowledge of Pinocchio’s sincerity for any given answer, we are unable to assess his competence to answer. He may be genuinely reporting his beliefs, but these beliefs could well be mistaken and thus not *true* justified beliefs. Indeed, unless he is an infallible puppet, some false but sincerely-held beliefs will certainly be present in his web, and the uttering of these will not trigger our suspicion by the deliverances of his nasal elongation.

Nevertheless, the model does seem to take care satisfactorily of beliefs *simpliciter*. If we ask Pinocchio, “Is this the way to Larissa”, and he answers, “Yes”, with no signs of nose-enlargement (or answers, “No”, accompanied by an increase in nose-length) we can take it that he sincerely believes it to be the case that it is the way to Larissa. This puts us as auditors of the testimony in an epistemically-stronger position than hitherto, in that we at least know what the beliefs of our testifier are, even though these may not be *true*, justified beliefs. They may not be tethered to reality. An even stronger position would be one in which our testifier’s credentials as a competent knower in the domain of interest (Larissan topography, in this case) were also known to us.

How then, can this simplified model be elaborated to encompass ‘real-word’ cases of testifying and auditing? The analogue of our ability to identify an enlargement in Pinocchio’s nose is our attunement to Coady’s ‘standard warning signs of deceit [or] confusion ...’.¹⁷² Growing up in a social world in which knowledge is important, we eventually become more or less adept at recognising what poker-players call a ‘tell’: a give-away sign that our testifier is not being sincere. We may conjecture that the strength of this ability plausibly follows a normal distribution across the population, from those who can easily be deceived, to those who have an unerring sense of the sincerity of their testifier. However, even in the most well-developed real-life cases – for example in an experienced member of An Garda Síochána interviewing a suspect – this is not as reliable as simply watching Pinocchio’s nose, for the ability to suppress the ‘tell’ is also highly developed amongst some individuals.

The third ‘standard warning sign’ on Coady’s list (following those detecting ‘deceit’ and ‘confusion’) is an indication of ‘mistake’, and this we see to be different from deliberate deceit, in that it relates not to sincerity but to competence. In educational settings, honest mistakes are plausibly more common than insincerity. A mistake is a lack of alignment between (i) the testifier’s beliefs and (ii) reality, so, if insincerity is ruled out, one way in which this could arise is that the testifier is in some way lacking in competence vis-à-vis the claimed knowledge to which testimony is being given. However, if the testifier is lacking in competence in a particular field of knowledge, and is aware of this shortcoming, then it is insincere to make assertions which are part of that field. It is a normative part of the speech act of testifying that the testifier only makes assertions over beliefs which are legitimately held: beliefs which the testifier is entitled to hold. So, the only circumstances in which we would actually be ill-advised to follow the directions given by the sincere testifier are those in which the incompetence is unconscious (to use William Howell’s¹⁷³ term) This would not be detected by our attunement to the standard warning signs of insincerity, for the testifier is also unaware of her own lack of entitlement to offer directions.

How then would we detect such incompetence? Clearly, the possibility of unconscious incompetence means that mistakes could not always be detected by direct observation

¹⁷² Coady (1992) op. cit., p.47.

¹⁷³ William Smiley Howell (1982) writes of ‘unconscious incompetence’ in *The Empathic Communicator* (Belmont, CA: Wadsworth Pub. Co.). I return to this theme in chapter 4.

of the testifier but would require supplementary knowledge in order to identify them. If the testifier appears to be sober and well-adjusted, a principle of charity requires us to accept the testimony, in the absence of any warning signs that the testimony might be flawed. We might consider whether the testimony being given is of a type that the testifier seems *prima facie* to be in a position to give. Travel directions would fall into this category, in the case of a testifier who appears to be a local person or who seems to be in an occupation in which good topographical knowledge is valued (e.g. a uniformed police officer or someone sitting in the driver's seat of a vehicle labelled 'Taxi'). Our motive in asking for help is to improve our epistemic position, so, if we have a complete lack of knowledge about the way to Larissa, taking the word of someone who looks to be better epistemically placed than we are is a likely way of achieving this ambition and acquiring the desired knowledge. A pupil asking his teacher a question in her announced area of expertise follows a similar principle. As we have seen, however, both the taxi driver and the teacher could make an honest mistake, so *qua* epistemically-virtuous auditors, we need to have ways of detecting such erroneous testimony.

One way of identifying mistakes on the part of a sincere testifier is to compare her advice with our background beliefs, in order to check for coherence. The occasions on which we are completely bereft of any knowledge of a particular topic of interest are comparatively rare in adulthood, so we usually have at least some inkling about how things are. If we vaguely believe that we are in Fársala and that Larissa is roughly to the north of our current location, but the testifier points south, then this dissonance at least gives us cause for suspicion. Prudence would then demand that we seek further confirmation before altering our existing view and covering much distance in the direction suggested – and prudence could be right. Our aim is to acquire the knowledge upon which goal-seeking action (travelling to Larissa) can successfully be based, so we will make whatever epistemic manoeuvres seem to us likely to help us achieve this. Much of this manoeuvring takes place at an automatic level, for epistemically-adept adults plausibly have an unconscious competence in evaluating testimony: a skill which only surfaces in the form of explicit consideration when certain triggers are activated. We accept our colleague's accounts of her weekend activities unreservedly until she tell us about the great god Pan smiling at her from inside her washing-machine.

Similarly, in accepting Pinocchio's testimony, we are being not gullible but merely legitimately trusting (for we know that we are currently receiving sincere testimony). Were a counterfactual state of insincere testimony to obtain, we would become aware of it immediately, via the nasal elongation of our testifier.

This plausibly applies in some measure to the real world, in that we can settle for a default position of believing testimony in 'non-loaded' situations, in the confidence that our insincerity-detecting and mistake-detecting sensibilities will be triggered in suspicious cases. The stipulation that the testimony should be non-loaded excludes cases where simple credulity is unwarranted because the testifier is likely to have an agenda other than being helpful to a fellow putative knower: in cases involving politicians, advertisers and property-auctioneers, perhaps. Their success in their chosen profession also demands that they possess advanced 'tell-suppressing' abilities. They are at the other limit from Pinocchio, in that they emit no indication of mendacity. The standard warning signs will thus not be detectable by us, so our spotting such a loaded situation is dependent upon our having a nuanced folk theory of human nature vis-à-vis testimony, typically acquired by induction from experience. This will include a categorisation of certain trades and professions as testimonially suspect (or not) and a contextual sensitivity to those situations in which there is a likelihood of attempted deception (or not).

In the Larissa scenario a further possibility remains, one which involves neither insincerity nor falsehood nor a 'loaded' agenda. Should the passerby point skywards, we might take this as an indication that we ought to be suspicious of the testimony about the directions to Larissa. However, our testifier may simply be operating in a different domain – astronomy rather than geography – and pointing the way to Larissa, one of the moons of Neptune.¹⁷⁴ This may seem to be a far-fetched possibility, but it is illustrative of the ways in which such talking at cross-purposes can be a problem in educational epistemic settings.

However, despite these possible problems of dishonesty, incompetence or 'talking past each other', it seems clear that Coady is right to give the hitherto-neglected subject of testimony a more prominent place in epistemology.

¹⁷⁴This Neptunian moon was named after the water-nymph Larissa, a lover of Poseidon [Gk.] (or Neptune [L.]) the god of the sea. NASA. www.solarsystem.nasa.gov/planets.

Knowledge as a Communal Asset

In particular, Coady's conclusion – that the attempt to effect a global reduction of testimonial sources to non-testimonial resources is a vain project – puts the spotlight more on knowledge as a communal asset and less on it as an individual accomplishment, won solely by one's own resources. Perhaps epistemology is indeed burdened with the myopic Cartesian legacy of the self-sufficient¹⁷⁵ individual knower and has largely ignored the unavoidably wide-angled, social nature of propositional knowledge. This myth has hitherto been pervasive in the scientific arena: Peter Lipton reminds us that '... the Royal Society, with its emphasis on individualist empiricism' has the motto '*Nullius in verba* (On no man's word)'.¹⁷⁶ However, one consequence of the latter-day explosion of knowledge and the division of epistemic labour is a de-emphasising of the autonomy of the individual knower. This is a particularly noteworthy feature in the scientific domain, and the philosophy of science has much to say on this.¹⁷⁷ Coady characterises the 'autonomous knower' as 'an autonomous ignoramus', because his isolation from the social reservoir of testimonial knowledge leaves him 'confined to a grasp of primitive and uninteresting items of knowledge'.¹⁷⁸ Martin Kusch and Peter Lipton have an even more striking designation for this mythical self-sufficient epistemic agent: the 'feral knower'.¹⁷⁹

¹⁷⁵ Or divinely-assisted, in the case of Descartes' epistemology of a non-deceiving God underwriting our 'clear and distinct' conceptions.

¹⁷⁶ Peter Lipton (1998) 'The Epistemology of Testimony', *Stud. Hist. Phil. Sci.*, vol.29, no.1, p.4. The Royal Society's website explains that this motto from 1663 reflects the Fellows' desire to 'withstand the domination of authority (such as in Scholasticism)'. Some lines from Horace (Epistles I.i, 1.13-14) expressing the same sentiment are also quoted:

You shall not ask for whom I fight
Nor in what school my peace I find;
I say no master has the right
To swear me to obedience blind.

(Horace, tr. C.T. Carr)

[<http://royalsociety.org/page.asp?id=6186>. Accessed 1 May 2009]

¹⁷⁷ Imre Lakatos, for example, sees science as a struggle between competing research programmes.

¹⁷⁸ C.A.J. Coady (2002) 'Testimony and intellectual autonomy', *Stud. Hist. Phil. Sci.*, 33, p.358.

¹⁷⁹ Kusch & Lipton (2002) op. cit., p.211.

This shift in emphasis is perhaps overdue, but Coady overstates his case somewhat, making the very strong claim that:

What should be incontestable is that there is a clear non-metaphysical sense in which perception, memory and testimony do put us unequivocally and ‘absolutely’ in touch with reality, i.e. there are definite truths which are based directly on these information sources. With regard to this level of expectation and suitability there can be no question about the reliability of perception and testimony.¹⁸⁰

This claim is certainly not ‘incontestable’: indeed, as we have seen, there are many philosophical arguments which *do* contest Coady’s assertion that testimony puts us ‘absolutely in touch with reality’. Many would allow perception a role in direct contact with reality, but would regard testimony as distinctly more indirect. There are also a number of empirical arguments which undermine these claims of testimony to be a royal road to the truth. The philosophical objections largely centre around epistemological questions concerning the gap between our perceptions (both direct and from testimony) about the world as-it-seems-to-be and the nature of the world as-it-is, a gap which is endemic to realism. The empirical objections come mainly from psychology.

Empirical Questioning of Testimony’s Value

A recent paper¹⁸¹ summarises the century of psychological research on the topic of testimony since Hugo Münsterberg’s (1908) book *On the Witness Stand* was published, and discusses the large number of variables which affect the accuracy of what even Locke would regard as the strongest type of testimony: eyewitness testimony. One particularly interesting recent development is the ‘analysis of DNA exonerations where wrongful convictions resulted from eyewitness testimony’.¹⁸² It seems clear that there is a strong empirical case against relying uncritically on testimony, bolstering the common-sense view that we are sometimes told things which are not true, because of either the mendacious agenda or the flawed perceptions of the testifier.

However, Coady points out that research itself depends on testimony and this fact will thwart any attempted empirical attack on the *general* reliability of testimony. We can

¹⁸⁰ Coady (1992) p.267.

¹⁸¹ Amina Memon *et al.* (2008) ‘Münsterberg’s Legacy: What Does Eyewitness Research Tell Us About the Reliability of Eyewitness Testimony?’, *Applied Cognitive Psychology*, 22, p.841.

¹⁸² Memon *et al.* (2008) p.849.

see this in the DNA case: unless we carry out the testing ourselves (and even then we are relying on the word of the designers of the particular methods we are following, as to the proper procedure and its reliability), we are forced to accept the testimony of the expert witness or have no DNA evidence at all. Similarly, those researching and writing on the fallibility of testimony typically refer unsuspectingly to the field's founder's written work (Münsterberg, 1908), forgetting that such writings are merely examples of extended testimony, so, by their own lights, suspect. Moreover Coady suggests that researchers,¹⁸³ 'tell the reader, fully expecting to be believed, that various results were obtained in a classic experiment in the 1930s by Jerome S. Bruner and Leo Postman at Harvard'.¹⁸⁴

Coady's strategy here is to rebut any criticism of the acceptance of testimony on empirical grounds, by showing that the empirical methods available themselves make use of testimony: 'Testimony cannot be unreliable if its reliability is required to prove that it is unreliable'.¹⁸⁵ However, Coady's logic only stands up to scrutiny if we insert the word 'always' thus: 'Testimony cannot *always* be unreliable if its reliability is required to prove that it is *always* unreliable'. That is, we see that Coady has only shown the impossibility of using testimonially-derived empirical evidence to cast *global* doubt on testimony.

On the other hand, if we do accept this, there still remains the possibility of *local* doubt about testimony; in other words, testimony may *sometimes* be unreliable: a common-sense observation. The testimony of the researcher armed with foreknowledge and triangulated against the observations of assistants with clipboards is very different in epistemic status from that of the 141 unsuspecting students who saw a mock assault suddenly occur during a university lecture.¹⁸⁶ The whole scholarly apparatus of experimental design, careful observation, data-gathering and peer-reviewed publication gives us greater confidence in the sober findings of the psychologist than in the recollected and reported perceptions of the startled, unprepared, individual students. We can thus accept – though not uncritically – the deliverances of such eyewitness

¹⁸³ Coady seems to be referring here specifically to Robert Buckhout (although he doesn't name him), who gives testimony in his article about an experiment that he too heard about via (extended) testimony. Buckhout's aim is to convince us that testimony is not to be believed, but he expects us to believe both his testimony and that of Bruner and Postman. Robert Buckhout (1974) 'Eyewitness Testimony', *Scientific American* 231/6, pp.23-31

¹⁸⁴ Coady (1992) op. cit., p.265.

¹⁸⁵ Coady (1992) op. cit., p.265.

¹⁸⁶ Robert Buckhout (1974) op. cit.

academic testimony in showing that eyewitness testimony simpliciter is itself sometimes flawed.

Coady's chief critic, Elizabeth Fricker, takes exception to his 'jeering dismissal of empirical work' and suggests that 'the key to the epistemology of testimony is: disaggregate'.¹⁸⁷ The practice of acquiring knowledge via testimony is not a single well-defined process which can be analysed exhaustively but a set of related activities. There is, I suggest, only a Wittgensteinian 'family resemblance' between these various activities, and to seek a single maxim to regulate our participation in these heterogeneous practices – that we ought *pro tanto*¹⁸⁸ to believe in testimony, as Coady asserts – is to oversimplify. When we consider the likelihood of the truth of a particular 'telling' (as Fricker labels testimony, widely defined) it is well known to us as masters of folk psychology that 'some people or types of people on some topics are reliable, others on others aren't'.¹⁸⁹ It is thus not unreasonable, as in the case of the social psychology experiment outlined above, to use one type of testimony to show the unreliability of another.

Monitoring Testimony for Trustworthiness

Childhood and the experience of being a stranger lost in a foreign land have much in common as far as testimony is concerned, in that both the child and the visitor have no choice but to trust the testimony received. There is thus an a priori acceptance principle in play, in that there need be – indeed, often there can be – no bolstering of the testimony from empirical or background knowledge, for this is in short supply in these cases.¹⁹⁰ However, Fricker argues that in 'normally knowledgeable adult hearers'¹⁹¹ this a priori principle is of vanishingly small importance compared with the

¹⁸⁷ Elizabeth Fricker (1995) 'Critical Notice [of Coady's (1992) book] : Telling and Trusting: Reductionism and Anti-Reductionism in the Epistemology of Testimony', *Mind*, vol.104, no.414, p.407.

¹⁸⁸ Coady himself does not use the Latin term, which, as we have seen, indicates 'in the absence of defeaters' in this case.

¹⁸⁹ Elizabeth Fricker (1995) *op. cit.*, p.407.

¹⁹⁰ I am not suggesting here that children are *tabulae rasae* – for we can credit them with more than this – but their relative lack of experience means that they have to take testimony on trust more than do adults. Recent empirical work has found that 'from an early age, children monitor the reliability of particular informants, differentiate between those who make true and false claims and keep that differential accuracy in mind when evaluating new information from these people', showing a Humean reductionist approach by being vigilant to testimonial track record. However, children defer 'to adult authority on issues of naming and categorization.' Melissa A. Koenig & Paul L. Harris (2007) 'The Basis of Epistemic Trust: Reliable Testimony or Reliable Sources?', *Episteme*, vol.4, pp.264-284, p.264

¹⁹¹ Elizabeth Fricker (2002) Trusting others in the sciences: *a priori* or empirical warrant? *Studies in History and Philosophy of Science*, 33, p.380.

rich background beliefs we can draw upon in evaluating the likelihood of a piece of testimony. Our trust of a testifier is likened by her to a simple bridge-like structure supported by a large number of vertical columns, only one of which is the a priori acceptance principle. In the absence of any relevant empirically-derived beliefs,

... it would be the only support, and have to bear the whole weight of the bridge (the right to trust). But in fact, there are very many other columns – empirical beliefs supporting the hypothesis that the speaker is trustworthy on her topic – so that the load borne by this column is very small.¹⁹²

This seems very plausible, but Coady, contra Fricker, does believe the a priori principle to apply to many everyday situations, such as his ringing the telephone company to enquire about his bill. He claims that in such ‘ordinary dealings with others we gather information without this concern for inferring the acceptability of communication from premisses about the honesty, reliability, probability, etc., of our communicants.’ This seems to me to be mistaken. Coady is not a child who takes just about everything on trust, nor is he a stranger in a foreign land who is forced to rely on the advice of an arbitrary passer-by. His dealings with his (Australian) telephone company take place against a rich backdrop of highly believable, safe and sensitive assumptions, including that the number he telephones is the correct one (an assumption which will be confirmed or refuted when the phone company answers or not), that the representative he speaks to has accurate data on the screen in front of him and that the call is likely to be recorded (reducing even further the possibility of a wayward employee giving out false information on a whim). All of this enables him to make inferences about his interlocutor’s trustworthiness, so the weight borne by Coady’s a priori blind trust is insignificant.

On this theme of trust, David Henderson sets out two ‘stylized positions’¹⁹³ – roughly corresponding to those of the local reductionists and anti-reductionists respectively – governing the ways in which testimony may legitimately be used in belief-formation: ‘Acceptance with Monitoring (AM)’ and ‘Acceptance with Reason Inhibition (ARI)’. Each position is held by a number of philosophers¹⁹⁴ and differs broadly in the extent to which the monitoring of our testifiers ought to be conducted. AM requires that ‘one

¹⁹² Elizabeth Fricker (2002) *ibid*, p.381. Interestingly, Ernest Sosa supplied Fricker with this analogy in commenting on her paper at a conference in 1998.

¹⁹³ David Henderson (2008) ‘Testimonial Beliefs and Epistemic Competence’, *Noûs*, 42:2, p.197.

¹⁹⁴ AM is, according to Henderson, a view held by Fricker (1987, 1994), Adler (1994), Lyons (1997) and Falkner (2000), whilst ARI is ‘championed’ by Burge (1993, 1997) and ‘congenial’ to Coady (1992, 1994).

must employ cognitive processes that monitor the trustworthiness of one's interlocutor or testimonial source', while ARI considers it to be 'a fitting epistemic *default position* that one accepts testimony, that one simply trusts one's interlocutor'.¹⁹⁵ However, this latter 'default' position is not a rigid response to testimony but a *pro tanto* stance that can collapse in the presence of underminers. The two positions identified by Henderson as representing the two ends of the spectrum of the contemporary epistemology of testimony are all not that extreme, for both accept that testimony *can* lead to knowledge – unlike Plato, Descartes and Locke (at least in some of their pronouncements). All that the distinction seems to me to amount to is a faint echo of the internalism/externalism debate. AM is associated with a *conscious* monitoring for trustworthiness which runs parallel to the auditing of testimony, whereas this checking is 'inhibited' in ARI, but nevertheless takes place at a *sub-conscious* level and will ascend to conscious awareness when warning signs are present. On my analysis, AM is an internalist construal of monitoring, whereas ARI uses an externalist, reliabilist, counterfactual version, which switches to an internalist mode (that is, fully available to consciousness) in the presence of appropriate cues.

The Cultivation of an Epistemically Virtuous Approach to Testimony

It is clear, then, that developing this attunement towards people and their pronouncements on various topics is something that sits in tandem with the gradual acquisition and refinement of the other epistemic virtues. There are times when hyperbolic doubt and the questioning of all testimony is the intellectually-virtuous response – for example, during a philosophy seminar – and other times when simple acceptance is warranted – for instance in response to a colleague saying that she is hungry. We gradually build up a working knowledge of whom we can trust to help us in our various epistemic predicaments, and what standards we ought to be applying in given situations, while at the same time we weave the fabric of beliefs which forms the background for assessing the likely credibility of the putative knowledge we are currently being offered via testimony. This practice arguably resists any simple codification into rules, requires the contextual awareness and good judgement of *phronēsis*, and involves a deft navigation between the two extremes of gullibility and scepticism.

¹⁹⁵ Henderson (2008) *op. cit.*, p.197.

Steven Shapin has developed an approach to testimony which is reminiscent of this Aristotelian notion of a virtue as the mean between two extremes, except that in his case either *extreme* can be a virtue under some circumstances and we must make a binary choice between them in the particular case rather than seeking a happy medium. Just as *phronēsis* is indispensable in finding the midpoint between two Aristotelian extremes, since any rules only apply ‘for the most part’ (*epi to polu*), there can be no blanket rule which bypasses the need for such good judgement and which algorithmically tells us the one to plump for.

In respect of testimony, Shapin proposes that for each epistemic maxim there is a counter-maxim. So, for example, the maxim that agreement between witnesses is epistemically desirable has the counter-maxim that this may indicate collusion or common dependence on an unreliable source.¹⁹⁶ Deciding whether the maxim or its counter-maxim should apply in a particular case cannot be the subject of a higher-level maxim (for this, I suggest, would have its own counter-maxim, thus launching an infinite regress), so there is no substitute for discernment and practical wisdom.

These powers of judgement are not fully developed in the epistemic novice (the young child), so there are occasions in which the acceptance of a particular testimonially-based belief is to be considered ‘epistemically blameless’ – to use Duncan Pritchard’s terminology¹⁹⁷ – yet would be evidence of a blameworthy credulity were the auditor an adult. As teachers, we ought to foster progress by helping the learners along this dimension of ‘non-gullibility’. We may feel that Jack’s acceptance of assurances that a giant beanstalk would grow from the magic beans he traded for a cow amounts to a touchingly naïve credulity in the case of a young child (an unmissable stage in a child’s epistemic development)¹⁹⁸ but is a culpable and epistemically-remiss example of gullibility for an intellectually-mature adult. Perhaps the relevant testimonial maxim here is: ‘If an offer appears to be too good to be true, it is too good to be true. And the counter-maxim could be ‘If an offer seems too good to be true, it may still turn out to be true’.

¹⁹⁶ Steven Shapin (1994) *A Social History of Truth* (Chicago: University of Chicago Press) Summarised in Peter Lipton (1998) ‘The Epistemology of Testimony’, *Stud. Hist. Phil. Sci.*, vol.29, no.1, p.29.

¹⁹⁷ Duncan Pritchard (2004) ‘The Epistemology of Testimony’, *Philosophical Issues*, 14, Epistemology, p.339.

¹⁹⁸ This phenomenon of infant credulity, and the deleterious consequences for childhood testimony, is explored in Principe and Smith’s (2008) paper, ‘The Tooth, The Whole Tooth and Nothing but the Tooth: How Belief in the Tooth Fairy Can Engender False Memories’, *Applied Cognitive Psychology* 22, pp.625-642. This has implications for educational virtue epistemology, to which I shall later return.

Another view is that *between* the two extremes of naïve credulity (exemplified in fiction by Jack of the beanstalk and Eleanor H. Porter's *Pollyanna*) and hard-bitten scepticism (exemplified in a BBC sitcom, *One Foot in the Grave*, by the character Victor Meldrew,¹⁹⁹ and in actuality by the BBC *Newsnight* television journalist Jeremy Paxman²⁰⁰) is a truth-conducive happy medium. Locating this virtuous Aristotelian mean between the opposing vices of gullibility and suspiciousness is a task which resists easy codification and depends on developing powers of judgement to allow one to avoid committing an 'epistemic injustice'²⁰¹ either to oneself or to one's testifiers. Politicians sometimes tell the truth to Paxman, and her friends sometimes lie to Pollyanna.

Conclusions of Chapter 2

This chapter has explored various viewpoints on testimony and has critically endorsed the contention that it is an important source of knowledge, on a par with perception, memory and reasoning. It has also shown the individual agent's dependency on the communal reservoir of testimonial knowledge. However, the testimonial source shares with the perceptual, the mnemonic and the cognitive, a human fallibility, so while the default stance towards it may be trust, there is still a need for some sort of epistemic vigilance on the part of the auditor. This monitoring ought to be developed and refined in the learners, though not to the extent of being a corrosive suspiciousness, for such an extreme is not epistemically virtuous and would interfere with the legitimate use of testimony in knowledge-acquisition. As Dan Sperber *et al.* put it: 'Vigilance (unlike distrust) is not the opposite of trust; it is the opposite of blind trust'.²⁰²

The successes of testimony, including our ability as a species to undertake co-operative projects such as politics, science, and, importantly for our present concerns, education, ultimately rest on our acting in accordance with the other-regarding epistemic virtues.

¹⁹⁹ Catch phrase: "I don't believe it."

²⁰⁰ Who famously claims silently to ask himself the question when interviewing politicians: "Why is this lying bastard lying to me now?"

²⁰¹ S.E. Marshall (2003) 'Epistemic Injustice: The Third Way?', *Metaphilosophy*, vol.34, nos.1/2, p.174. The phrase is Miranda Fricker's (not Elizabeth Fricker's).

²⁰² Dan Sperber, Fabrice Clément, Christopher Heintz, Oliver Mascaró, Hugo Mercier, Gloria Origgi and Deirdre Wilson (2010) 'Epistemic Vigilance', *Mind & Language*, vol.25, no.4, September, pp.359-393. p.363

Michael Welbourne's description of Reid's view of our epistemic gifts provides a clue as to how an analysis of testimony may be made through the lens of such virtues:

According to Reid, we have two inherent, God-given and co-ordinate propensities, propensities which tally. One of them he calls the Principle of Credulity – the propensity to believe what we are told; the tallying principle he calls the Principle of Veracity – the propensity to be truthful when we tell other people what is what.²⁰³

Clearly, Reid sees 'credulity' as a virtue and not a vice, but we need to distinguish between untenable credulity and reasonable acceptance.²⁰⁴ Nevertheless, these 'propensities' of veracity and credulity, together with an extended use of Reid's 'tallying', will be important in epistemic ventures such as education, so in the next chapter I turn to these other-regarding intellectual virtues. In general, epistemic agents are not frequently in a position where they know little or nothing about the subject matter to which testimony is being given, but the formal learning situation can be one such case. In these circumstances, the teacher may insist on occasion that learners revert to the acceptance principle, since they have no way of knowing if the testimony is trustworthy or not. A better action, though, is for her to attempt to bridge the gap between the testimony and their prior experience and knowledge, so that they are in a position to assess its plausibility. To do so requires the teacher to enounce her testimony judiciously, such that learners' memory, perception and rationality are engaged. In turn, this will draw on her other-regarding epistemic virtues, guided by *phronēsis*.

²⁰³ Thomas Reid (1764) *An Enquiry*, in Michael Welbourne (2002) 'Is Hume really a reductivist?', *Stud. Hist. Phil. Sci.*, 33, p.419.

²⁰⁴ In the present work, there is a degree of equivocation over the word 'credulity', by sometimes following conventional usage in assuming it to be a vice. However, on these occasions it is generally prefaced by a critical adjective such as 'naïve'.

Chapter 3 - Other-regarding Epistemic Virtues

Introduction

Here I begin to investigate a key theme in this thesis: that the teacher is normatively a person who embodies ‘other-regarding epistemic virtue’. This notion is a virtually unexplored one,²⁰⁵ particularly as it relates to the teacher, so this chapter develops possible meanings. These concentrate on, but go beyond, the obvious exemplification of ‘other-regarding epistemic virtue’ as involving a straightforward epistemic process in which teachers tell students what they believe, and students gratefully receive it. In particular, the doxastic webs of both teacher and learner are seen to be located in wider epistemic communities and disciplinary fields, and are linked by plausibility, reputation, and reciprocity. The presence of what I term ‘complementary’ virtues in the teacher and the taught – along the lines of Reid’s ‘tallying principle’ – underlies both virtuous knowledge-acquisition and the development of stable intellectual dispositions in the learner. Reid’s own example of credulity and veracity is used as the main vehicle for exploring the notions ‘other-regarding’ and ‘complementarity’. I test the limits of his pairing by developing criteria for felicitous epistemic transactions that involve the two ideas, as well as by identifying a number of ways in which the default propensity of veracity might legitimately be subverted. Analysis of the other complementary virtues pertinent to the teaching and learning situation is to be found in chapters 5 and 6.

To begin with, though, I shall prepare the ground for a development of the overall concept of ‘other-regarding epistemic virtue’ by examining some historical notions of self-regard and other-regard. This sets the scene for an exploration of a virtuous approach to ‘the other’, first in general terms, and then as a specifically epistemic notion.

²⁰⁵ I know of only one published work on the topic: Jason Kawall (2004) ‘Other-regarding epistemic virtues’, *Ratio* (new series), XV, 3, pp.257-275.

Self-regard and Other-regard

For Homer, a virtue is an attribute which enables a free man²⁰⁶ to fulfil his role in life and death. Physical strength, deviousness and boldness allow the Homeric hero to excel at challenges, such as those of the battlefield, and thus achieve fame, honour and glory (*kúdos*). This intense individualism does not rule out the use of other persons, but the significant word is ‘use’: the Homeric hero regards others, both ethically and epistemically, merely as means to his own ends or as an audience for his reputation-enhancing exploits. Odysseus, for example, accepts the testimony of the enchantress Circe²⁰⁷ in plotting a course between the twin hazards of the six-headed monster (Scylla) and the deadly whirlpool (Charybdis). But there is no question of his sharing this knowledge in an epistemically other-regarding manner, for doing so would compromise his personal survival (and no doubt irritate the six of his crew he intended to sacrifice to occupy the attentions of Scylla’s six heads as he navigated his ship within her reach). The ‘wisdom’ qua multi-skilled self-serving cunning (*polymētis*) of Odysseus is replaced in later Greek thinking by a more other-regarding construal.

Aristotle defines practical wisdom, *phronēsis*, as: ‘a true and reasoned state of capacity to act with regard to the things that are good or bad for men’.²⁰⁸ In other words, practical wisdom enables us both to do the right thing for our own sake – as in the Homeric vision – and also to help those with whom we interact in the *polis* similarly to move towards the good and away from the bad. This type of wisdom is at least potentially other-regarding, for we are to act in the best interests of ‘men’ rather than just in our own narrow interests.

Some writers, however, accuse Aristotle of ‘egoistic eudaimonism’ and contrast this with the ‘noble sentiments of Bentham and Mill’, for: ‘A good man is [to Aristotle] a producer of happiness – but of his own happiness and not, save incidentally, that of others’.²⁰⁹ While we would not consider Aristotle’s ethics to be *agapistic*,²¹⁰ his

²⁰⁶ The Latin word *Virtus* also points to this notion of virtue as manliness (L. *Vir* = ‘Man’, as in ‘Virile’). The virtuous man was a brave warrior.

²⁰⁷ Interestingly, Aristotle quotes this advice to illustrate his claim that the mean sometimes lies nearer to one extreme than the other: ‘Far from this surge and surf keep thou thy ship’. The ‘lesser of the two evils’ in this case was the six-headed monster instead of the deadly whirlpool, for the latter’s ‘surge and surf’ would kill the whole crew, rather than just the six who would perish to feed the monster. Aristotle, *Nicomachean Ethics*, bk.II, 9, 1109a3.

²⁰⁸ Aristotle *Nicomachean Ethics*, bk.VI, 5, 1140b4.

²⁰⁹ Jonathan Barnes (2003) ‘Introduction’ to Aristotle, *Nicomachean Ethics* [tr. JAK Thompson, notes by Hugh Tredennick] (London: Penguin Books, 2004). Because Barnes is contrasting Aristotle’s ethics

description of man as by nature a political animal (ζῷον πολιτικόν)²¹¹ shows the importance of features other than the life of solitary contemplation in his scheme. In particular, he claims, ‘Nobody would choose to live without friends even if he had all the other good things’.²¹² This being so, we cannot write off Aristotle’s prescribed *modus vivendi* as merely seeking egoistic eudaimonia, for this would allow only a life of solitary philosophical contemplation and not the other desideratum of the exercise of the social virtues.

Another significant change between the Hellenic era of Socrates, Plato and Aristotle, and the Archaic one described by Homer, is in the perceived relationship between the virtues (*aretai*) and man’s function (*ergon*). To Homer, the virtues are simply *means* to an end (the hero’s glory), whilst the Hellenic virtues are partly *constitutive* of an end: that of eudaimonia.²¹³ So, on the Aristotelian model, we do not act from, say, wisdom merely instrumentally, with the intention of gaining advantage over our fellows (and thus flourishing by elevating our own position): we act from wisdom because to do so *is* to flourish. Virtue is its own reward. If this exercising of virtue benefits others, so much the better. Justice (δικαιοσύνη) is similarly other-regarding, as is temperance or prudence (σωφροσύνη), to the extent that we tame our animal instincts and practise rational self-control in our dealings with others, thus protecting them from our worst excesses. Acting with other-regarding virtue also has the effect of benefiting the virtuous agent himself, for to Aristotle a virtuous life *is* a flourishing life, as we have seen. The good life is one in which we are wise (φρόνησις), just, temperate and steadfast (ανδρεία), not one in which we jockey for personal glory at all costs and hack down anyone who stands in our way. Man’s *ergon* in the Hellenic dispensation is to exercise the virtues, not simply to discharge his appointed role heroically.

From an Hellenic viewpoint, ‘other-regarding’ ought not to be conflated with ‘altruistic’, for such an un-Aristotelian extreme position deprives us of the balanced life in which we have regard both to the needs of others and to our own needs. More recent

with modern notions of morality – which tend towards the deontic or utilitarian, and so emphasise our duties to, and effects upon, others – he overstates a little to make his distinction clearly.

²¹⁰ In the secular sense of doing the most benevolent thing in a particular situation.

²¹¹ Aristotle, *Politics*, 1253a2.

²¹² Aristotle, *Nicomachean Ethics*, 1155a5.

²¹³ Perhaps I oversimplify a little here. For Homer, to fight well in battle is to flourish, so there is a sense in which the Homeric virtues are also constitutive as well as instrumental. However, the ends are what really count, so we see Odysseus unscrupulously carrying out all manner of cunning plans – lying, cheating and sacrificing many innocents – in order to secure his victory and maintain his reputation.

(empirical) work shows that *Homo reciprocans* is a 'conditional cooperator', with a 'penchant for reciprocity',²¹⁴ who becomes other-regarding only when his attunement to the particulars of the situation indicates the desirability of such cooperation. His benevolence is neither constant nor limitless. Susan Wolf suggests that what we might term an 'unconditional cooperator' with unrestricted altruism – or, as she puts it, a 'moral saint' – lives a rather barren life, which 'does not constitute a model of *personal* well-being towards which it would be particularly rational or good or desirable for a human being to strive'.²¹⁵ Neither is the moral saint attractive to others, for:

... we look in our paragons of moral excellence for people whose moral achievements occur in conjunction with ... some interests or traits that have low moral tone. [...] [but moral saints] make us feel uncomfortable - they highlight our own weaknesses, vices and flaws²¹⁶

We might quibble with Wolf's use of the word 'uncomfortable', though, for encouraging someone out of their comfort zone by modelling a high standard of personal conduct could well be a highly productive move. But this ought not to involve excess. A moral saint who embodied the virtues to an excessive degree would represent an unattainable ideal, too remote from the plain person to act as an exemplar. To Aristotle, she would also have failed to hit the happy medium and could thus be regarded as having strayed towards vice. (In a similar way, a teacher whom we might label an 'epistemic saint' would be too distant from the learners to act as a role model. Unwarranted pedantry and exaggerated carefulness in enquiry, for example, are neither emulable traits nor epistemically-fruitful dispositions). Determining the right actions which promote both our own well-being and that of others is not easy, but will not involve the excesses of full moral (or epistemic) sainthood.

Interestingly, Wolf categorises such apparently harmless activities as reading Victorian novels or playing the oboe as inimical to moral sainthood, for they reduce the time available for feeding the hungry, curing the sick, and so on.²¹⁷ However, if we entertain my notion of an 'epistemic saint' once again, her suggested prohibitions for a moral saint (reading Victorian novels and playing the oboe) would not apply, for being

²¹⁴ Samuel Bowles, Robert Boyd, Ernst Fehr, Herbert Gintis (1997) '*Homo reciprocans*: A Research Initiative on the Origins, Dimensions, and Policy Implications of Reciprocal Fairness', p.5.

²¹⁵ Susan Wolf (1982), 'Moral Saints', *Journal of Philosophy*, 79, pp.419-39 in Roger Crisp & Michael Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press) p.79 [emphasis added].

²¹⁶ Wolf (1982), op. cit., p.83 & p.85. She quotes George Orwell on a similar theme: 'Many people genuinely do not wish to be saints, and it is probable that some who achieve or aspire to sainthood have never felt much temptation to be human beings'. George Orwell (1945) *A Collection of Essays* in Wolf (1982) op. cit, p.45.

²¹⁷ Susan Wolf (1982), op. cit., p.83 & p.85.

an effective other-regarding *epistemic* agent requires us also to exercise our *self*-regarding intellectual virtues in order that our efforts to ameliorate the epistemic predicament of others are underwritten by our own active engagement with knowledge. The web-like nature of knowledge means that familiarity with (say) the Victorian novel may well help us to reduce the epistemic plight of our beneficiaries, even if it has no obvious and direct connection with the immediate issues at hand. In fact, nuanced insights from literature may well serve us better in our other-regarding epistemic *praxis* than nostrums drawn from some types of educational research.²¹⁸ The overall point though, is that in order to help others epistemically, we need also to attend to our own epistemic needs, for being a ‘selfless altruist’ is neither good for us qua epistemic agents, nor for our interlocutors. Neither is the other extreme of ‘selfish hedonist’ to be regarded as a virtuous stance for the epistemic agent, for, as we have seen, the ‘feral knower’ is deprived both of the advantages of participating in knowledge sharing communities and of the eudaimonian benefits of other-regarding intellectual activity.

However, these arguments look like consequentialist, rather than virtuous, justifications for adopting a position between epistemic altruism and what we might term ‘epistemic hedonism’: we locate ourselves thus because by doing so we are well-placed to gather up the epistemic prizes. Taking this vantage point is a utilitarian strategy designed to maximise our acquisition of epistemic goods, or, in a broader construal, to maximise our epistemic good and that of our interlocutors. Alternatively, a consideration of our responsibilities might cause us to regard such a position as our deontic obligation: if we wish to do our epistemic duty to those with whom we are enwebbed, some degree of intellectual self-maintenance will be both needed and justified.

Neither of these analyses really captures the notion of epistemic, other-regarding *virtue*, though. They use traditional consequentialist or deontological alternatives. The

²¹⁸ A view shared by Carr, whom it ‘strikes ... as highly implausible to suppose that social or other scientific research into pedagogy might reveal much about teaching.’ Carr (2006) op. cit., p.181. He does not, however, discount such a possibility completely, but he places more faith in our ‘wider literary inheritance’ as a resource for ‘professionally relevant normative enquiry into the complexities of educational and other forms of human motivation and association’. p.182. Colin McGinn makes a similar case in his (1997) book *Ethics, Evil, and Fiction* (Oxford: Clarendon Press), using examples from *Billy Budd*, *Lolita*, *Frankenstein*, *The Picture of Dorian Gray* and other literary works. He describes, for instance, how Frankenstein’s Creature learned to speak and read and ‘become[s] generally civilized’ (p.159) by observing others. McGinn then associates this with Augustine’s account of language acquisition (which we have already discussed on p.82) and uses it to illuminate the connections between language-learning and the growth of humanity and reason. His overall thesis is that ‘the story of morals is the story of moral stories’. (p.178).

particular nature of the other-regarding virtues thus becomes obscured. We attempt next to uncover what this might be.

A Virtue-Epistemic Approach to ‘The Other’

In developing a virtue *epistemic* stance to ‘the other’, we can learn much from the parallel work already carried out in virtue *ethics*. The *locus classicus* of the latter term is Elizabeth Anscombe’s (1958) article ‘Modern Moral Philosophy’,²¹⁹ which began the revival of virtue ethics. In essence, she argues that a moral theory based on the Aristotelian concept of virtue is an improvement on a deontic one centred on notions of obligation and duty – legalistic notions that only make sense within what she considers to be an outmoded ‘divine law’ framework of morality. She also attacks utilitarianism and sets out to show that virtue ethics is superior.

I shall consider briefly the writings of Philippa Foot and others in virtue *ethics*, before identifying some implications for virtue *epistemology*, using ideas from Jason Kawall and Linda Zagzebski. This discussion bears significant fruit, in the form of the notion that the other-regarding epistemic agent ought to act in accordance with the doxastic predicament of her interlocutor in a complementary way. In other words, the different intellectual virtues animating the epistemic benefactor and beneficiary should interlock. In this section, I also broaden the focus beyond the dyad of those whom we might term the epistemic agent and patient, and consider how a *field* can also benefit from ‘epistemic largesse’. There is discussion too of truth-telling and its limitations, and of timely intervention, both regulated by the ideal of well-attuned benevolence: ideas which will later be shown to be important in educational virtue epistemology.

²¹⁹ G.E.M. Anscombe (1958) ‘Modern Moral Philosophy’, *Philosophy*, 33. Reprinted in Roger Crisp & Michael Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press), pp.26-44.

Virtue Ethics and Regard for the Other

Two years after Anscombe inaugurated contemporary virtue ethics, Georg Henrik von Wright claimed in his *Gifford Lectures* that the difference between self-regarding and other-regarding virtues is as follows:

One way of marking the distinction between them is to say that self-regarding virtues essentially serve the welfare of the agent himself, who possesses and practises them, whereas other-regarding virtues essentially serve the good of other beings ... The sharpness of the distinction is not obliterated by the obvious fact that virtues, which are essentially self-regarding, may also be accidentally other-regarding, and *vice versa*.²²⁰

This initially appears to be a plausible division, but it turns out to be unsatisfactory, for the ‘self-regarding’ virtues can have an important role – and not merely an accidental one – to play in the welfare of others. We saw this, earlier, in my claim that an other-regarding *epistemic* agent must also exercise her self-regarding intellectual virtues, so that her epistemic beneficence is tethered to the world by her own active enwebment with knowledge. If a lecturer keeps up with the latest work in her field for sake of her students, the intellectual benefits they receive are not accidental but are essentially connected with her reading, writing and conference-going. In a more general way, by analysing who can be served by the virtues – which Gabriele Taylor and Sybil Wolfram catalogue under the headings of putatively ‘self-regarding’ (‘temperance, prudence, courage and industry’) and ‘other-regarding’ (‘generosity, conscientiousness, honesty, veracity and justice’) – they show that von Wright’s dichotomy is untenable, and propose their own classification.

So, we want to say, the distinction between the self-regarding and other-regarding virtues is the distinction between those virtues which make up what we often call strength of character and those which make up what we might call good intentions or perhaps moral goodness – though we have to be careful about this label.²²¹

We see, however, that Taylor & Wolfram’s division is also permeable – at least in our educational setting – for apparently self-regarding ‘industry’, on the part of the lecturer who is well-enwebbed with her discipline, may well have major effects on her ‘generosity’, ‘conscientiousness’ and ‘veracity’ vis-à-vis her work with her students.

²²⁰ The 1960 *Gifford Lectures* were later published as Georg Henrik von Wright (1963) *The Varieties of Goodness* (London: Routledge & Kegan Paul) p.153.

²²¹ Gabriele Taylor & Sybil Wolfram (1968) ‘The Self-Regarding and Other-Regarding Virtues’, *The Philosophical Quarterly*, vol.18, no.72, pp.238-248, p.247

Her intellectually self-regarding activity renews her excitement about her subject and encourages her to share this enthusiasm and knowledge with her students.

Another of the first contemporary philosophers to consider the virtues with respect to the question, *cui bono?* is Philippa Foot: 'But now we must ask to whom the benefit goes, whether to the one who has the virtue or rather to those who have to do with him'.²²² She identifies certain virtues as being beneficial *both* to the virtuous person and to those around him (for example, courage, temperance and wisdom) and other virtues (charity and justice) as being of direct benefit only to his fellows. Indeed, Foot points out that these other-regarding virtues²²³ may sometimes not only be of no benefit to the virtuous man, they may even be against his interests and demand some sacrifice on his part.

Foot's analysis is non-consequentialist, in that she places great emphasis on the virtuous *intentions* of the agent and does not look just at the outcomes. However, she also sees well-intentioned shortcomings in performance as sometimes still blameworthy (for example, in the case of one person doing wrong to another through avoidable ignorance). Earlier, I developed a similar theme concerning the culpability of a motorist with uncorrected known defective eyesight causing a road accident in which others were injured. Related to this notion of intentionality,²²⁴ is that of the affective dimension of virtuous acts (both intention and emotion having in common some sort of mediating role between virtue and action). Foot draws attention to the difference between Aristotle and Kant in this respect.²²⁵

As we have seen, Aristotle considers a mark of truly virtuous action to be the pleasure we take in it: not only does the virtuous person do the virtuous thing for virtuous reasons, he also has a well-ordered affect such that he enjoys doing it. Kant, on the other hand, as we find in the *Groundwork for the Metaphysic of Morals*, sees 'true moral worth' only in those actions performed out of a sense of duty. The philanthropist who 'find[s] an inner satisfaction in spreading joy and take[s] delight in the

²²² Philippa Foot (1978) 'Virtues and Vices' in Crisp & Slote (eds.) (1997) op. cit., p.164.

²²³ Foot does not use the term 'other-regarding', but her meaning is the same.

²²⁴ Here, I mean 'intentionality' in Elizabeth Anscombe's sense of a deliberate act rather than Edmund Husserl's meaning of 'aboutness'. G.E.M. Anscombe (1957) 'Intention', *Proceedings of the Aristotelian Society*, New Series, Vol. 57, pp. 321-332.

²²⁵ Foot (1978) op. cit., p.171.

contentment of others'²²⁶ does not receive Kant's approbation, while for Aristotle this enjoyable benevolence would be praiseworthy. We note here, though, that the pleasurable feeling is not a *sufficient* indicator of virtue.

Foot explicitly rules out 'mental powers' as virtues,²²⁷ for while they are beneficial, they are virtues of a mind, not of a man (just as strength is a virtue of a body). The next task, then, is to show that 'mental powers' qua epistemic virtues can – pace Foot – be analysed along the same lines as the other-regarding virtues identified by her: that is, as attributes which are beneficial both to ourselves and to our fellows, and which furthermore give us pleasure.

Epistemic Virtues as Other-regarding

Jason Kawall's paper, 'Other-regarding epistemic virtues',²²⁸ goes some way towards such an analysis, but in concentrating on the advantages to the beneficiary he underplays the benefits to the agent doing the other-regarding, and ignores completely the element of pleasure. Kawall lists the following as 'candidates' for other-regarding epistemic virtues:

(i) honesty (eg in one's testimony), sincerity, integrity (including an unwillingness to misuse one's status as expert), and creativity (which can inspire others, and lead to the discovery of new truths in a community), (ii) ... the skills of a good teacher, and (iii) ... the skills of a good listener (and critic) insofar as they help other epistemic agents to articulate and examine their own beliefs carefully and lucidly.²²⁹

His first-approximation definition of an other-regarding epistemic virtue is based on the condition that the knowledge-acquisition enabled by such a virtue relates to *others*, rather than to the epistemic agent herself, and this is highly significant to our project. The division he employs is not an altogether happy one, however, for 'the skills of a good teacher' and 'the skills of a good listener' are in separate categories, when the former ought to include the latter (although of course a good listener need not be a good teacher). Since Kawall explicitly intends an *aretaic* virtue-based, rather than reliabilist, approach, there is a need to frame the definition in such a way that the *intentions* of whom we might call the 'giving agent' are important; that is, the agent is

²²⁶ Immanuel Kant (1785) op. cit., p.8 [Online] Available at: <http://www.earlymoderntexts.com/pdf/kantgw.pdf>.

²²⁷ Foot (1978) op. cit., p.164.

²²⁸ Jason Kawall (2004) 'Other-regarding epistemic virtues', *Ratio* (new series), XV, 3, pp.257-275

²²⁹ *ibid.*, p.260.

not merely a learning object who unwittingly provokes knowledge-gains in the patient but one who consciously intends the beneficiary of her virtue to make such gains. He thus modifies Zagzebski's definition of intellectual virtue simpliciter to capture his notion of *other-regarding* epistemic virtue (not a concept mentioned by Zagzebski herself):

An act of other-regarding intellectual virtue A is an act that arises from the motivational component of A, is something that a person with A would (probably) do in the circumstances, is successful in achieving the end of the A motivation, and is such that the beneficiaries of the act acquire a true belief (cognitive contact with reality) through these features of the act.²³⁰

This is rather a demanding definition, including as it does the requirement that not only must the other-regarding epistemic agent intend the patient to make 'cognitive contact with reality', but also that her intentions are actually brought to fruition: that she is successful. If the Aristotelian *sine qua non* of the agent taking pleasure in her virtuous actions is also added (an addition made neither by Kawall nor Zagzebski), the bar is set high for her other-regarding acts to achieve recognition as being epistemically-virtuous. Such an act must be (i) motivated by intellectual virtue, (ii) of a type that an intellectually-virtuous person would engage in (iii) non-accidentally successful in achieving its goal in the intended beneficiary and (iv) pleasurable to the agent.

Crucial, but not mentioned by Kawall, is Zagzebski's definition of knowledge, which follows immediately after her quoted definition of intellectual virtue: 'Knowledge is a state of cognitive contact with reality arising out of acts of intellectual virtue'.²³¹ If we combine this with Kawall's definition of other-regarding epistemic virtue, it seems that *knowledge* – not merely true belief – is available to the beneficiary through other-regarding acts of epistemic virtue on the part of an epistemic agent.

However, care must be exercised in coming to this conclusion. In Zagzebski's model, the virtuous epistemic agent and the person I have characterised as the beneficiary (or the patient) are one and the same. It is the virtue-activated agent who achieves 'cognitive contact with reality' for himself, and not some other person who benefits vicariously from these virtuous acts. Indeed, on Zagzebski's construal, a passive (that is, non-virtuous) beneficiary has no entitlement to his epistemic benefits: unless they are acquired by the personal exercise of virtue, they are not to be regarded as

²³⁰ Kawall (2004) op. cit., p.265, based on Zagzebski (1996) *Virtues of the Mind*, p.270 [Italics in original].

²³¹ Zagzebski (1996) *VOM*, p.270 [Emphasis in original].

knowledge, even if the ‘benefactor’²³² has acted from other-regarding epistemic virtue. In some very recent work, Sosa too denies the knower much legitimacy for his true belief if it reached him without his acting from his own epistemic virtue: ‘Relatively little of the credit belongs to the ultimate believer ... if all he did was to trust the authoritative source without question’.²³³

One solution to this difficulty is the recognition that the epistemic virtues relevant to the benefactor need not be the same as those of the beneficiary. To be sure, the beneficiary must act from *some* intellectual virtue in order to achieve ‘cognitive contact with reality’, but this could simply be Zagzebski’s ‘being able to recognize reliable authority’.²³⁴ In a complementary manner, the intellectual virtues motivating the benefactor’s acts might be ‘the teaching virtues: the social virtues of being communicative, including intellectual candor and knowing your audience and how they respond’.²³⁵

Complementary Intellectual Virtues

So, a fuller working-out of Kawall’s appropriation of Zagzebski’s definition of intellectual virtue yields a more nuanced view of the intellectual virtues which might be at work in agent-patient, benefactor-beneficiary, testifier-auditor (or, for our purposes, teacher-taught) dyads. Kawall’s requirement that the benefactor’s act of other-regarding epistemic virtue be successful (that is, that it lead to ‘cognitive contact with reality’ in the beneficiary) generates, I suggest, the corollary that the beneficiary too must act with epistemic virtue (although not necessarily, nor even typically, the same particular virtue which motivates the benefactor.) For the engagement between benefactor and beneficiary to bear fruit, both parties have to act with conjugate epistemic virtue.

The two testimonial ‘propensities’ identified by Reid and mentioned in the last chapter – the principle of credulity and the principle of veracity – are both other-regarding in the sense that they involve an epistemic relationship with another person: either a testifier or an auditor. But it is the latter propensity – veracity – which is the more

²³² Not a term used by either Zagzebski or Kawall.

²³³ Sosa (2011) op. cit., p.129. Since Sosa’s AAA model of knowledge requires such credit (aptness involving credit), this is almost equivalent to saying that the trusting agent did not receive knowledge.

²³⁴ Zagzebski (1996) *VOM*, p.114.

²³⁵ Zagzebski (1996) *VOM*, p.114.

obvious candidate for exemplifying epistemic other-regarding virtue, in that it relates to occasions on which we are in some way concerned with helping a fellow knowledge-seeker by means of our testimony. In the former – credulity – we appear to be merely optimistically helping ourselves. Later, however, I show that credulity too can be other-regarding, but in the very different sense of submission to a discipline or practice (p.120). Furthermore, these two ‘co-ordinate’ propensities are to a large extent interdependent, for, as I argued earlier, we ought to have regard to our own epistemic condition in order to contribute usefully to that of another. We may consider ourselves to be nodes in a community of knowers, and our usefulness to adjoining epistemic agents – and hence to the community at large – depends not just on our truth-*telling* propensities but also on our having well-developed testimony-*receiving* virtues (together with the on-board epistemic resources of perception, memory and reason).

This represents a change of emphasis in the characterisation of the epistemic agent, whose mission has traditionally been seen as one of selfishly accumulating the largest hoard of epistemic prizes. Charles Taylor calls this Lockean ‘disengaged subject exercising instrumental control’ the ‘punctual self’.²³⁶ The mythical self-sufficient epistemic agent – the ‘feral knower’²³⁷ – has simply to gather up as many true justified beliefs as possible, while ensuring that no false beliefs contaminate the booty.

These further considerations lead, I conjecture, to an even more demanding set of criteria for an act to be considered one of other-regarding epistemic virtue. Not only must the acts of *both* parties in the transaction be virtuously motivated, the specific virtues animating each ought also to interlock correctly, and moreover they should both enjoy it. I describe this interlocking in more detail in chapter 6 (p.244). If the putative beneficiary either fails to act from a complementary virtuous motivation which enables the benefactor’s intentions to bear epistemic fruit, or derives no pleasure from the engagement, then the *benefactor* is also deemed to have failed. This ‘success’ component, dependent as it is on the contingencies of putative beneficiaries’ virtues, motivations, and affective responses, seems, however, to be a rather unfair requirement

²³⁶ Charles Taylor (1989) *Sources of the Self: the Making of the Modern Identity* (Harvard: Harvard University Press) p.174. He intends ‘punctual’ to denote ‘point-like’, or a ‘perfectly detachable consciousness’ (p.172): very different from the interconnected, engaged model of the epistemic agent which motivates this chapter.

²³⁷ Kusch & Lipton (2002) op. cit., p.211

of the other-regarding epistemic agent. Kawall also wants to dilute this demanding criterion:

...we could hold that agents are at least epistemically praiseworthy if they testify clearly, though their listeners fail to form an appropriate belief (where the error lies in the listeners)...²³⁸

Against this, one could argue that the fully virtuous other-regarding epistemic agent – in the Aristotelian sense rather than that of an epistemic saint – ought to be aware that on a particular occasion simply giving clear testimony is an inadequate response to the epistemic predicament of her intended beneficiary. Even a less-than-perfect epistemic agent could justifiably be accused of naïvety in blaming her interlocutor for neither understanding, nor paying attention to, nor enjoying her lengthy and comprehensive disquisition on a particular topic.

In a felicitous epistemic interchange, Aristotle's *sungnōmē* (sympathetic judgement) is thus indispensable in allowing us to achieve some understanding of, and attunement with, our interlocutor's precise predicament before attempting to help. However, this amendment aside, Kawall is right to question the extent to which the benefactor can legitimately be held accountable for the shortcomings of her intended beneficiaries. We cannot simply let the benefactor off the hook though, as Kawall suggests, and award her the epistemic runner-up prize of 'praiseworthy'. Indeed, 'praiseworthy', or our earlier 'creditable', implies success and not merely valiant effort.²³⁹ Perfection is clearly too demanding, but some degree of empathy with the epistemic needs and motivations of her beneficiaries is indispensable for the benefactor, if the success component of the Zagzebski/Kawall definition is to be addressed. This attunement is more *likely* to lead to success, defined in terms of the beneficiaries' enhanced 'cognitive contact with reality', and is thus a necessary component of the other-regarding virtues, particularly for a teacher. It falls short of being sufficient though,

²³⁸ Kawall (2004) *ibid.*, p.265.

²³⁹ 'Teaching' too can be seen as a success-term. Nel Noddings quotes John Dewey (1933) on this theme: 'Teaching may be compared to selling commodities. No one can sell unless someone buys ... There is the same exact equation between teaching and learning that there is between selling and buying'. (Nel Noddings (2004) 'Is Teaching a Practice', Joseph Dunne & Pádraig Hogan (eds.) (2004) *Education and Practice: Upholding the Integrity of Teaching and Learning* (Oxford: Blackwell) p.159). However, we might find Dewey's metaphor to be badly chosen, and Noddings shows that 'taught' may be a success word but 'teaching' is not. We can see that there might be unanticipated thwarting factors which interfere with what would otherwise be successful teaching, through no fault of the teacher. Her *sungnōmē* ought to warn her, though, when her project has no hope of success. If this warning is absent or ignored, then the teacher is arguably not truly teaching. To claim to have taught something, implies at least partial uptake by at least some of the learners.

and does not *guarantee* success, for the process may fail in one of three distinct ways, which I here label ‘Vicious Rejection’, ‘Vicious Acceptance’ and ‘Virtuous Rejection’ (a fourth, successful, category ‘Virtuous Acceptance’ is the desirable outcome, given the stipulation that the putative knowledge being offered is ‘true’ or, alternatively, that it represents ‘cognitive contact with reality’).

Vicious Rejection occurs when the intended beneficiary blocks the benefactor’s well-intentioned epistemic actions, motivated by vices such as closed-mindedness and dogmatism (what Roberts and Wood call ‘eidosclerosis’).²⁴⁰ Note that this need not imply a ‘transmission’ model of knowledge-transfer: closed-mindedness can also effectively neutralise more pedagogically constructivist approaches on the part of the benefactor.

Vicious Acceptance is in some ways more problematic than Vicious Rejection. The beneficiary has now acquired a true belief, so all appears to be well. But, since the belief is not justifiably held by having a virtuous provenance, it ought not to be regarded as knowledge. It is untethered and indefensible. An example of this might be a gullible acceptance of unintentionally-true testimony, even though the ‘standard warning signs’ of suspect testimony, or a failure to cohere with the auditor’s existing web of beliefs, were present. A positivist or behaviourist test of the ‘beneficiary’s’ belief-web would attribute the title of ‘knowledge’ to such gullibly-acquired beliefs, but these would not be so categorised by virtue epistemology.

Virtuous Rejection implies that the intended beneficiary has good (internalist) grounds for refusing to accept the true beliefs offered by his benefactor, an offering motivated by her epistemic virtue. This may be due to a mismatch between the epistemic virtues enacted by the two parties, or it may simply be a consequence of the fallibility of humans. Unless we employ a circular definition – in which knowledge is deemed to be the result of intellectual virtue, and intellectual virtue is that which yields knowledge – there is always the possibility of a gap between virtuously-acquired beliefs and *true* justified beliefs. Students’ epistemic judgements, like our own, are not infallible, and they may opt for the ‘wrong’ virtue when two or more are in conflict (believing in expert testimony vs. behaving with intellectual courage, for example): so acting out of intellectual virtue is no guarantee of acquiring knowledge. Because of these potential

²⁴⁰ Roberts & Wood (2007) op. cit., p.202.

clashes between virtues, the over-arching virtue of *phronēsis* will be needed by the mature knowledge-seeker in deciding which intellectual virtue, or combination of virtues, is proper for the occasion.

For instance, the teacher may tell the student that all objects accelerate at the same rate in the Earth's gravitational field. This true testimony invites the student to exercise the virtue of '... proper trust of authority outside [his] area of expertise' (*VOM*, p.319). But the student has already had much experience of observing falling objects, since he first dropped a rattle from his pram, and later made paper aeroplanes, so he might instead act from '... the ability to think up illuminating scientific hypotheses ...' (*VOM*, p.21). He does not recognise that this is an instance of a phenomenon outside his area of expertise and thus virtuously (but incorrectly, as it turns out) rejects the teacher's testimony. In another sense, though, this is not a truly virtuous action, for the learner's practical wisdom is not yet fully developed and his ability to judge the situation and choose the right virtue(s) is thus unreliable.

Beyond the Epistemic Dyad

Other-regarding epistemic virtue in a benefactor-beneficiary dyad is likely to be relatively uncommon in its fullest manifestation, given the demanding definition of acts of epistemic virtue considered above (that is, they are: virtuously motivated, display *sungnōmē*, interlocked, successful qua virtuous uptake, and pleasurable). However, restricting discussion to such a dyad would betray individualist prejudices, in that by doing so we require successful knowledge-growth in a named other, together with the rest of the criteria we have developed so far (the personal virtuous motivation of the beneficiary, accompanied by personal feelings of pleasure as a result of his successfully acting individually with epistemic virtue). As we saw a moment ago, this can be blocked in number of ways by the intended beneficiary, thereby thwarting his benefactor's good intentions.

If, however, the named beneficiary is replaced by an epistemic community, such individualised demands are no longer as significant. A view of the precise interlocking required of an epistemic dyad can be replaced with a more diffuse set of linkages which distribute epistemic largesse in a less direct way. The benefactor is now seen as a node in a web of interconnected epistemic agents (each of whom also possesses a personal

web of belief). Enhancing the knowledge available to this web causes credit to accrue to the benefactor – even if there is limited uptake by any one individual member of the web – as long as there is *some* uptake, virtue and pleasure distributed diachronically around the web.

Here, one remnant of Homeric thinking – which we largely dismissed in the move from being entirely self-regarding to being (somewhat) other-regardingly virtuous – is reputation-maintenance.²⁴¹ This notion of punishment for transgressing social norms, and the concept of preserving renown and reputation remain important in understanding other-regarding epistemic virtue. We are part of epistemic communities in which the providing of new knowledge is particularly prized, so it seems to me that our epistemic reputation depends upon our perceived reliability and co-operativeness in contributing such new knowledge. There are formal and informal reputational sanctions for individuals who transgress these norms, and there are honours for those who exceed them.

However, the requirement of virtuous and pleasurable uptake by a named beneficiary is now made less demanding. There needs to be *some* virtuous uptake and pleasure among the other members of the web, but shortcomings in individual cases do not negate the epistemic credit due to the benefactor. A parallel case in the moral sphere would be the benevolent alms-giver whose good intentions sometimes misfire, when one or more of her intended beneficiaries spend what they receive on harmful drugs. She still deserves credit, though, if her well-motivated acts make the world a better place generally (that is, if some of her donations are spent on food, shelter and so on). Furthermore, the benefactor does not generate her contribution *sui generis*, but relies on her membership of various webs to weave her own personal web of beliefs, parts of which she then makes publicly available. She must still act from self-regarding epistemic virtue to construct her own web, and be animated by other-regarding virtue in adding to the knowledge available in the external web of which she is a node (deriving pleasure from so doing).

²⁴¹ When Odysseus returns home to Ithaca, after his long adventurous voyage, he finds himself compelled to confront violently the suitors of his wife Penelope. Maintaining his reputation demands that he wreak vengeance both on the guilty suitors and on their innocent companions.

This less demanding characterisation of other-regarding epistemic virtue I offer does look a little generous, however, and is itself open to criticisms such as the one I made earlier of Kawall's letting the ineffective agent off the hook (p.114). However, there are checks and balances and various types of long-run accountability which enable judgements to be made about the epistemic value of an agent's contribution to the community. These will be more nuanced than those relating to dyadic knowledge-sharing, in keeping with the more subtle processes of virtuous knowledge creation and diffusion by and through an epistemic web. A brief examination of one of the various epistemic enterprises undertaken by academic communities illustrates this.

Let us consider a member of the editorial board of an academic journal. If we attempt to analyse her as a testifier in a dyadic relationship with a named other, she seems to be unsuccessful. She appears to have no direct epistemic impact on any named individual, using the standard virtuous other-regarding criteria (successful uptake, recipient-pleasure and so on). However, by taking a broader and longer view – that is, by considering her beneficial effects on the extended web of belief characterising a particular discipline over a significant period of time – her contribution might take on a more favourable hue. By refereeing journal articles, she has contributed to the rigour and integrity of the discipline and its associated public and individual webs of belief. The sum of knowledge available to the community has increased because of her agency, irrespective of the fact that she has neither contributed new knowledge nor virtuously donated any knowledge to a named beneficiary. She has still shown epistemic virtue and the community has benefited as a consequence.

There would be some identifiable, direct beneficiaries of her interventions (notably the article authors, who benefit from the reviewer's possession of Kawall's epistemic virtue of being a 'good ... critic, insofar as they help other epistemic agents to articulate and examine their own beliefs carefully and lucidly'²⁴²); but once the net spreads wider, her influence would be harder to detect. Tracing the effects of journal articles launched into the world would be difficult enough, without attempting to analyse further what contribution the referee made to the net gain in knowledge of an individual reader of these texts. The empirical fact that her influence is hard to track does not mean, however, that it is absent.

²⁴² Kawall (2004) op. cit., p.260.

A Different Perspective: The Field as ‘Other’

One additional line of analysis is the notion that the virtuous epistemic agent is disposed to regard not only others as beneficiaries of her intellectual benevolence, but also the field itself. Relatedly, Kawall gives the example of an orchestral musician. The individual player has ethical duties towards the rest of the orchestra, for by adjusting his own dynamics, pitching and so on, he makes the other musicians sound good. However, all of these actions are also part of being an excellent musician: they are duties owed to the *practice* of music. As Kawall puts it: ‘Abiding by these other-regarding duties is essential to achieving excellence in any such practice and is not merely an ethical requirement’.²⁴³

This approach seems plausible in the epistemic realm too. For example, as well as acting in line with ethical duties towards patients, a clinician arguably ought²⁴⁴ to exercise epistemic virtue for the sake of medical knowledge. Similarly, as well as considering her pupils’ immediate intellectual welfare, a teacher ought to do what she can to advance the discipline of pedagogy. As we have seen, though, these more diffuse duties are particularly problematic in terms of success criteria, and even more direct transactions can run into comparable difficulties. The principle ‘ought implies can’²⁴⁵ is relevant here, for ‘if we cannot guarantee the epistemic behaviour of others, how can we have [other-regarding virtues and duties]?’²⁴⁶

Kawall’s answer to this is, in essence, that we ought to carry on acting in line with our other-regarding epistemic virtues and hope for the best, while recognising that individual uptake is largely beyond our control. Nevertheless, ‘we can at least act virtuously with respect to those aspects of the situation which we can control’.²⁴⁷ This seems to me to be a good compromise between fretting about exactly what impact our virtuous intentions may have in practice, and being too blasé about our other-regarding epistemic effectiveness. Yes, there will probably be what I term vicious rejection, vicious acceptance and virtuous rejection of the knowledge we are attempting to broker

²⁴³ *ibid.*, p.273.

²⁴⁴ The word ‘ought’ is used here in the ordinary way, not as a deontic term. Even Anscombe, in arguing against the notion of duties, uses the word at the very point when she is attacking these apparent obligations: ‘... the moral sense of ‘ought’, ought to be jettisoned’. G.E.M. Anscombe (1958) *op. cit.*, p.27.

²⁴⁵ Or, as some say, ‘Ought implies Kant.’

²⁴⁶ Kawall (2004) *op. cit.*, p.274.

²⁴⁷ *ibid.*, p.274.

to other putative knowers (in addition to the desired state of virtuous acceptance): but as long as we do our best with the means at our disposal to enhance the knowledge in the epistemic webs of which we are nodes, we can count ourselves as being other-regardingly epistemically virtuous, albeit imperfectly.

Another interpretation of the field as ‘other’ involves us not in contributing to the field, but in submitting to it. Iris Murdoch writes of the respect she feels towards the object of learning: in her case the ‘authoritative structure’ of the Russian language. She describes the process thus:

Love of Russian leads me away from myself towards something alien to me, something which my consciousness cannot take over, swallow up, deny or make unreal.²⁴⁸

This is a species of ‘other-regarding’, as distinct from self-regarding, virtue, except that the ‘other’ is not another person, but is nevertheless analogous, with a sort of independent life of its own. In leaving our comfortable Platonic cave and giving ourselves over to something free-standing in this way, we attempt to overcome our egotistical fantasies and see what lies beyond: a project in which ‘the enemy is the fat relentless ego’.²⁴⁹ This process is clearly not animated by the same ‘other-regarding’ virtues discussed earlier (p.110), since we are not attempting to ameliorate the epistemic predicament of another *person*, but neither is it solely self-regarding. Elsewhere, Murdoch talks of falling in love with a *person* and suggests that this ‘can prompt a process of unselfing wherein the lover learns to see, and cherish and respect, what is not himself’.²⁵⁰ Similarly, in the case of unselfing ourselves to a field, we might say that we ‘regard’ it as an autonomous entity which does not depend on our ‘regard’. More rigorously, we see that it aligns with one of the two testimonial ‘propensities’ identified by Reid – the principle of credulity (the other being the principle of veracity). We suspend our selfishness and suspicion and submit ourselves credulously to the discipline. If language-use is categorised as a practice, Alasdair McIntyre’s words are significant here. Like Murdoch, he addresses the importance of submission to the authority of something pre-existing:

²⁴⁸ Iris Murdoch (1985) ‘The Sovereignty of Good over Other Concepts’, *The Sovereignty of Good* (London: Ark). Reprinted in Roger Crisp & Michael Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press) p.107.

²⁴⁹ Iris Murdoch (1971) ‘On God and Good’, *The Sovereignty of Good* (London: Routledge Classics, 2001) p.52.

²⁵⁰ Iris Murdoch (1992) *Metaphysics as a Guide to Morals* (London: Penguin) p.17.

To enter into a practice is to accept the authority of those standards [of excellence] and the inadequacy of my own performance as judged by them. It is to subject my own attitudes, choices, preferences and tastes to the standards which currently and partially define the practice.²⁵¹

Furthermore, it is a characteristic of practices that there is some inevitable deference by the tyro to experienced practitioners, an other-regarding epistemic virtue (in the looser sense) in which the ‘other’ is once again a person:

... [the practice’s] goods can only be achieved by subordinating ourselves to the best practice so far achieved, and that entails subordinating ourselves within the practice to other practitioners.²⁵²

It is important to note that this submission seems to be particularly relevant to the *initial* learning stage. Having deferred to current Russian usage, or to the customs of other practices, we may later go on in our writing and speaking to cause changes in the language, or by practising, to help the practice to evolve.

To return to a more usual construal of ‘the other’, we next consider the question of the multiplicity of the other-regarding virtues, and examine one possible way of bringing some order to the list by promoting ‘benevolence’ as the chief motivation.

The Role of Benevolence in Regulating Regard for the Other

Michael Slote has developed an interesting agent-based approach to virtue *ethics* which may well have some bearing on present considerations of other-regarding virtue *epistemology*, given his accentuation of the virtue of universal benevolence.

Slote begins with James Martineau’s hierarchy of motives, which ‘ascends (roughly) as follows: vindictiveness; love of sensual pleasure; love of gain; resentment/fear/antipathy; ambition/love of power; compassion; and, at the apex, reverence for the Deity’.²⁵³ Martineau advances the theory that all moral decisions involve pairs of items from this hierarchy, and that to act rightly is to act in accordance with the highest-ranked motive. Even setting aside the rather Victorian (1885) prissiness in the choice of items, it is clear that using the hierarchy uncritically will often lead to incorrect moral decisions. For example, two decades later, Sidgwick

²⁵¹ Alasdair MacIntyre (1985) *After Virtue* [2nd edn.] (London: Duckworth), p.190.

²⁵² *ibid.*, p.191.

²⁵³ Michael Slote (1997) ‘Agent-Based Virtue Ethics’ Roger Crisp & Michael Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press) p.250.

points out that ‘there are times when it is better for reasons of justice to act from resentment rather than compassion’.²⁵⁴ Resentment and compassion (if we take the former to be cognate with ‘vindictiveness’) are almost as far apart as it is possible to be on Martineau’s hierarchy, so the objection that one can trump the other, in a reversal of their respective status, is a serious one. Sidgwick settles this difficulty by suggesting that of the key secular candidates for a supreme regulative motive – justice, prudence and universal benevolence – the last should prevail, since it is aligned with Martineau’s ‘compassion’, the highest motive on his hierarchy short of ‘reverence for the Deity’. Unfortunately, as Slote points out, he then goes on to equate the *motive* with its *outcomes*: that is, human happiness. What we now have is not a hierarchy of agent-centred virtuous motives regulated by compassion, but a consequentialist ranking on a par with act-utilitarianism.

However, if this move of Sidgwick’s is sidestepped, Martineau’s hierarchy, regulated by compassion (or by the theological virtue of ‘charity’) is a useful way of bringing some order to the other-regarding virtues – both moral and intellectual. More specifically, for our educational purposes, benevolence outranks other possible motives for epistemic acts – a principle which thus ought to regulate truth-telling. This again shows the permeability of the moral and the epistemic, in that moral considerations are able to exert much influence on other-regarding epistemic decision-making. Let us explore further how these and other considerations might be brought to bear on testifying as an other-regarding, virtuous epistemic act.

Speaking Out

Kawall²⁵⁵ makes much of truth-telling as an other-regarding epistemic virtue, listing it first amongst his candidates: ‘honesty (eg in one’s testimony)’. Perhaps he over-emphasises this virtue, however. Simply testifying clearly is not the only way of benignly enhancing the epistemic position of one’s interlocutors; nor is it always the best way. But Kawall thinks that the epistemology of teaching reduces to the question: ‘How can an agent best transmit information and knowledge to others in her epistemic community?’²⁵⁶ This indicates a somewhat unsophisticated view of teachers as mere testifiers, or truth-tellers, rather than as persons with the role, *inter alia*, of benevolent

²⁵⁴ Paraphrased in Slote (1997) *op. cit.*, p.251.

²⁵⁵ Who, we might recall, has published the only article on other-regarding epistemic virtue thus far.

²⁵⁶ Kawall (2004) *op. cit.*, p.271.

epistemic agents who are motivated to enhance the knowledge of learners by whatever means seem to be both virtuous and effective. Granted, there typically exists an asymmetry in knowledge between teacher and learner in a particular field, but this does not mean that simply pouring what Kawall calls ‘information’ down this knowledge-gradient will necessarily or sufficiently improve the epistemic status of the learner. I shall pick up this point later, in considering some of the implications for education of virtue epistemology (p.218). For the moment, I want to flag up concerns over assertions such as: ‘The study of the methods by which an agent can convey information will become part of epistemology ...’²⁵⁷ Metaphors such as ‘convey’ or ‘transmit’, where the thing being so transported is ‘information’, seem to me to be an inadequate way of capturing the other-regarding epistemic agent’s actions in supporting the doxastic processes of learners, or persons situated at other nodes in the community’s epistemic web.

Contrary to the notion that truth-telling is always a virtuous epistemic action, I suggest that the unremitting truth-teller is almost as great a menace as the pathological liar. If our other-regarding epistemic virtue is to achieve the desideratum of helping the beneficiary to ameliorate his epistemic predicament, then a tactful intervention may well be required rather than a steamrolling assertion of truths (or, perhaps, ‘truths’). To be sure, we ought to be sincere, but this sincerity plausibly should take the form of an epistemic solicitude rather than an ill-considered blurting-out of what we take to be the case. If we sincerely want to be of use, our over-riding *epistemic* concern ought to be to gain insight into our interlocutor’s epistemic predicament and act in ways likely to alleviate it. Benevolent or prudential²⁵⁸ concerns might of course clash with these other-regarding epistemic motivations in everyday situations, however: our interlocutor may wish to know where he can buy some heroin, or be in the epistemic predicament of possessing our bank card but not knowing the PIN number. In these cases, we become morally (rather than epistemically) other-regarding, or prudentially self-regarding, respectively. There is, I argue, no absolute requirement for sincere testimony, despite Kawall’s assertion that: ‘Honesty is a virtue and we have duties to testify clearly etc. in a fashion which should help others gain true beliefs’.²⁵⁹ Benevolence, prudence or justice may well override this ‘duty’. However, as teachers

²⁵⁷ Kawall (2004) op. cit., p.272.

²⁵⁸ In the non-technical sense of ‘self interested’.

²⁵⁹ Kawall (2004) op. cit., p.274.

we arguably ought, as a general principle, to default to truth-telling; so we next examine what this might mean. Some of the discussion here does not relate directly to the teaching and learning situation, but it is nevertheless needed in order to provide a solid theoretical understanding of a key pedagogical activity. I develop the aspects most relevant to the educational context in later chapters (particularly chapters 5 and 6).

Michel Foucault writes of an ancient Greek term, *parrhesia*, which in modern English is roughly ‘free speech’, in French ‘*franc-parler*’, and in German ‘*Freimüthigkeit*’.

The word indicates total frankness:

Etymologically, ‘*parrhesiazesthai*’ means ‘to say everything’ – from ‘*pan*’ (everything) and ‘*rhema*’ (that which is said). The one who uses *parrhesia*, the *parrhesiastes*, is someone who says everything he has in mind: he does not hide anything, but opens his heart and mind completely to other people through his discourse.²⁶⁰

This is the opposite of the demagogue who uses flowery language to convince the audience of something to which the orator does not personally subscribe: the *parrhesiastes* uses the most direct language available to him, in order to share with the audience his sincere beliefs, unclouded by rhetoric. Foucault draws on Plato to distinguish between what he characterises as ‘pejorative’ uses of the term *parrhesia*, and a more positive construal which includes speaking the truth even when that is a risky thing to do. If we act on Foucault’s clue and go direct to Plato, we see examples of the first type – of what might be called ‘chattering’ – including Socrates’ warning against allowing democratic free speech to harm the interests of the state:

... and is the city not chock full of liberty and freedom of speech [*parrhesia*]? And has not every man licence to do as he likes? ... And where there is such licence, it is obvious that everyone would arrange a plan for leading his own life in the way that pleases him’.²⁶¹

The other ‘pejorative’ usage identified by Foucault relates to the vows of silence taken by some religious orders, in whose daily life idle chat is seen as both undermining monastic discipline and interfering with the individual’s contemplation of God.

A more positive construal of *parrhesia*, on the other hand, sees it as praiseworthy, in that the *parrhesiastes* speaks the truth, even when it would be more profitable to him to withhold it, or to be insincere. The image which immediately comes to mind, when

²⁶⁰ Michel Foucault (1983) ‘Discourse and Truth: the Problematization of *Parrhesia*’, Six lectures given by Michel Foucault at the University of California at Berkeley. Later Published under the title *Fearless Speech* (Semiotext(e) / Foreign Agents, 2001).

²⁶¹ Plato, *Republic*, 557b. These are clearly not the views of the historical gadfly Socrates, however.

considering Foucault’s second meaning, is of Socrates wandering in the *agora* and saying sometimes unpalatable things to those he meets. Foucault suggests that there has to be some personal risk associated with the truth-telling for it to be counted as *parrhesia*: a tyrant cannot be a *parrhesiastes*, for speaking his mind is not dangerous, but to make unwise yet true pronouncements *to* a tyrant is the action of a *parrhesiastes*. For this reason, Foucault claims that a teacher cannot be a *parrhesiastes*. This, though, is clearly a contestable assertion. In the conventional case of a teacher enunciating received wisdom in the context of a highly stratified institution (in which teachers and taught have a well-defined status-differential), there is little or no risk over the enounced. However, risk *is* present in more dialogical – Socratic – teaching, in which the status-differentials are reduced or removed, and the enounced relates to the enunciandum²⁶² in a way which recognises the humanity of the enunciator. Foucault claims, ‘The specific “speech activity” of the parrhesiastic enunciation thus takes the form: “I am the one who thinks this and that”’.²⁶³ In our educational context, we see that whilst there is greater risk, the enounced now bears traces of the humanity of the enunciator and renders the enunciandum more vivid and available to the learner.

We turn next to Aristotle who, unlike Plato, neither dismisses the *parrhesiastes* as a member of the lotus-eating, chattering classes, nor requires *parrhesia* to involve speaking bravely to a higher authority (thereby putting the *parrhesiastes* in danger). In fact, in the *Nicomachean Ethics*, *parrhesia* is a practice of the person with the ‘very upper class Greek virtue’²⁶⁴ of *megalopsuchia* – magnanimity, or ‘great-heartedness’. The *megalopsuchos* is open in expressing his views, ‘because concealment, i.e. caring less for the truth than for what people think, is a mark of timidity’.²⁶⁵ He is also inclined to ‘speak and act straightforwardly (his superior attitude makes him outspoken and candid – except for what he says in irony to the general public)’.²⁶⁶ We have here a picture of a haughty aristocrat, who regards himself as possessing *alethia* rather than mere *doxa* and expects his *parrhesia* to be taken seriously, even when he is being languidly ironic (*eirōneia*) for public consumption. There is no element of reciprocity in his conduct; the *megalopsuchos* is not Homo reciprocans, for he requires nothing in

²⁶² ‘Enunciandum’ indicates ‘that which is to be enounced’. For our purposes, a proposition contained in an examination syllabus would be paradigmatic example.

²⁶³ Foucault (1983) op. cit. [emphasis added].

²⁶⁴ Hugh Tredennick’s footnote to 1123a35, *Nicomachean Ethics* [tr. J.A.K. Thompson, notes by Hugh Tredennick] (London: Penguin Books, 2004) p.93.

²⁶⁵ Aristotle, *Nicomachean Ethics*, 1124b, 27-29.

²⁶⁶ *ibid.*, 1124b, 29-31.

return for his gift of truth. As Aristotle puts it: ‘He is disposed to confer benefits, but is ashamed to accept them, because one is the act of a superior and the other that of an inferior’.²⁶⁷

We see can see, then, that a single comprehensive definition of *parrhesia* is elusive. Indeed, I have identified four distinct characterisations: (i) a vice of democratic libertines, (ii) a sin against piety, (iii) a virtue for a tyrant’s counsellor, or (iv) an admirable practice of the magnanimous. This is not necessarily a problem, however, for this discussion began by casting doubt on Kawall’s assertion that ‘Honesty is a virtue and we have duties to testify clearly etc. in a fashion which should help others gain true beliefs’.²⁶⁸ The fact that such honest testimony can sometimes be regarded as vicious [for example, (i) and (ii)], or involves marked power-imbalances [(iii) and (iv)] bolsters these doubts.

The intuition that such speaking out is *per se* neither a virtue nor a vice leads us to the Aristotelian insight that there may be a happy medium for truth-telling. Aristotle himself suggests that there is a ‘disposition intermediate between boasting [*alazoneia*] and understatement [*eirōneia*’].²⁶⁹ To overstate one’s case is a vicious act, and so is understatement (although to a lesser extent). So:

Falsehood is in itself bad and reprehensible, while the truth [*alētheia*] is a fine and praiseworthy thing; accordingly, the sincere man, who holds the mean position, is praiseworthy, while both the deceivers are to be censured, particularly the boaster.²⁷⁰

Attunement Towards the Other’s Epistemic Needs

Furthermore, there may well be occasions on which withholding or dissembling are *epistemically*-virtuous actions (as well as the times, mentioned earlier [p.123], in which such actions are morally or prudentially indicated). Henri Bergson calls for ‘*tact de la vérité pratique*’²⁷¹ – and it is this tactfulness, based on what he terms *le bon sens*, which enables us to discern what our interlocutor needs from us, and to provide it in the most

²⁶⁷ *ibid.*, 1124b, 10-12.

²⁶⁸ Jason Kawall (2004) *op. cit.*, p.274.

²⁶⁹ *Alazoneia* and *eirōnei*. The translator, J.A.K. Thompson, renders *eirōnei* as ‘understatement’ this time, rather than the ‘irony’ he had plumped for earlier. Aristotle, *Nicomachean Ethics*, 1127a13-15.

²⁷⁰ Aristotle, *op. cit.*, 1127a29-33.

²⁷¹ ‘Tactfulness in practical truth.’ From a speech at the Sorbonne prize-giving of 1895 (in Hans-Georg Gadamer (1975) *Truth and Method*, 2nd Edition (New York: The Seabury Press) p.25.

helpful way we can. This is a familiar theme in various writings. In Aristotle, for example, we have the ‘attunement’ component of *phronēsis*, which enables us to be sensitive to the contingencies of *praxis* in which we currently find ourselves and thus do the right thing as befitting ‘good men in their behaviour towards others’.²⁷² Hans-Georg Gadamer also draws our attention to Aristotle’s discussion of *sunesis* (understanding) in bk.VI, ch.11 of the *Nicomachean Ethics*. His reading is that ‘Understanding is a modification of the virtue of moral knowledge. It appears in the fact of concern, not about myself, but about the other person’.²⁷³ The person who has such understanding ‘thinks with the other and undergoes the situation with him’.²⁷⁴ This links nicely with present discussions of other-regarding epistemic virtue and points to the need to draw on our fellow-feeling (Aristotle’s *sungnōmē*, sympathetic judgement) to empathise with, and understand, our interlocutor’s predicament before lending a hand. This attentiveness, or *aisthēsis*,²⁷⁵ enables us to attain the ‘situational appreciation’ needed for epistemic *eupraxia*.

The specific needs of our interlocutor could be considered as the minor premiss in a practical syllogism in which the major premiss asserts our (defeasible) epistemic duty to aid our fellows in their epistemic predicaments. It is by using the *aisthētic* intuitions furnished by *sungnōmē* and *nous* that we are able to discern the minor premiss, of which our interlocutors are denizens:²⁷⁶ ‘... the intuition that operates in practical inferences being concerned with the ultimate and contingent, i.e. the minor premiss’.²⁷⁷ However, having used our attunement²⁷⁸ to capture the minor premiss, our troubles are not yet over. We now have achieved an insight into what it is that our interlocutor wishes to know, but simply telling him may not satisfy his epistemic thirst. I next examine the various possibilities for virtuous, other-regarding epistemic action.

If our interlocutor’s desire is to know the way to Larissa, and we have used our *bon sens* to identify his target as the Greek town and not the Neptunian moon, then our

²⁷² Aristotle, *Nicomachean Ethics*, bk.VI, 11, 1143a, 32.

²⁷³ Gadamer (1975) op. cit., p.288.

²⁷⁴ *ibid.*, p.288.

²⁷⁵ Richard Smith translates *aisthēsis* as ‘attentiveness’, whilst Dunne and Wiggins render it ‘situational appreciation’, according to Smith (1999) ‘Paths of Judgement: The revival of practical wisdom’, Carr, W (ed.) (2005) *The RoutledgeFalmer Reader in Philosophy of Education* (London: Routledge) p.209.

²⁷⁶ To borrow Smith’s epigram: ‘we are denizens of the minor premiss’. Smith (1999) op.cit., p.212.

²⁷⁷ Aristotle, *ibid.*, bk.VI, 11, 1143b41.

²⁷⁸ Or the French *bon sens*, Latin *sensus communis*, and German *Gesunder Menschenverstand* – all terms used as near-equivalents at various places by Gadamer (1975) in *Truth and Method*. I take these to be cognate with *sungnōmē*.

epistemically-virtuous response is quite straightforward. We simply point the way. This action might, however, be over-ridden by moral considerations, and we could conceivably behave virtuously by *preventing* our interlocutor from finding his way – to a town currently affected by widespread rioting, for example. This would ideally be by way of furnishing extra knowledge about Larissa (thus drawing further on our other-regarding epistemic virtue), but language difficulties might force us to carry out what could, *prima facie*, be considered an insincere act, in order to save our interlocutor from harm: pointing him in the opposite direction. Such an act would be epistemically culpable, but perhaps morally the right thing to do (taking benevolence as our supreme regulative principle, after Slote and Martineau). This clash between two of the great transcendental desiderata – the true and the good – is of some importance here. Interestingly, in the vignette sketched out above, the true has the potential to act in concert with the good, as long as *all* of the salient facts can be known by the beneficiary. It is *partial* knowledge – knowing the way to Larissa, but not knowing the severe hazards which will greet him upon arrival – which is dangerous, and which can, arguably, legitimately be hobbled in the interests of our beneficiary's good. But this act is, in itself, fraught with dangers.

The Dangers of Epistemic Insincerity

Plato, notoriously, pursues such a line of putatively warranted deception in book III of the *Republic*. He talks of 'opportune falsehoods' and 'one noble lie', which he attempts to justify as being in the state's interests, for 'the rulers of the city may, if any, fitly lie on account of enemies or citizens for the benefit of the state'.²⁷⁹ This is an asymmetrical dispensation, however, since 'for a layman to lie to rulers of that kind we shall affirm to be ... a great ... sin'.²⁸⁰ The 'noble lie' proposed for the state to propagate takes the form of a myth intended to maintain the social order, in that the rulers are to be regarded as having been fashioned by the gods deep under the earth, and made precious by the inclusion of gold during this process. Lesser humans – those destined to be farmers and craftsmen – were infused with iron and brass.²⁸¹ Such a lie is different in intention from that of the Larissan local, for not only is it epistemically vicious, it also appears to be morally vicious (that is, maleficent rather than beneficent)

²⁷⁹ Plato, *Republic*, III, 389b.

²⁸⁰ Plato, *Republic*, III, 389c.

²⁸¹ Plato, *Republic*, III, 415.

with respect to the individual auditor, for whom (say) a life as a rude mechanical follows his brassy designation.

Plato claims that in the absence of these and other repressive measures, an overly-liberal democracy will evolve, in which ‘The teacher ... fears and fawns upon the pupils, and the pupils pay no heed to the teacher’.²⁸² The main worry here is that the stable structure and authority-relationships of society will be overturned and that even slaves will no longer know their place, being ‘no less free than the owners who paid for them’.²⁸³ Karl Popper, among others, draws attention to the inconsistency between these views, which Plato puts in the mouth of Socrates in the *Republic*, and those expressed by the Socrates of the *Meno*. In the former, slaves are seen as less than human, and teachers as having unarguable intellectual authority; in the latter, Socrates shows an anti-authoritarian intellectualism²⁸⁴ by engaging a slave’s reasoning powers in his role as an intellectual midwife rather than that of a master.²⁸⁵

Assertions that the individual’s best interests and those of the state are necessarily in alignment, and the widespread use of misinformation, are characteristic of totalitarian states (such as those led by Stalin and Mao) and are deeply troubling. The justification is consequentialist, in that telling such an ‘opportune falsehood’ is regarded as having beneficial outcomes for the body politic – in the claimed form of a stable society, unambiguous roles being apparent to each individual, citizens being content with their lot, and so on.

However, to deontologists such as Kant, the lie is culpable since it deprives the individual of what Kant characterises as our chief human birthright: the ability to use our reason to make informed and autonomous decisions. Our being misled by Plato’s propagandist’s typology – which he claims to be divinely-ordained – of gold man, brass man and so on, removes the possibility of our making rational choices based on relevant knowledge. To a lesser degree, giving the intended visitor to Larissa false geographical beliefs (from benevolent motives) has the same effect of thwarting his autonomous wishes (see p.128). For all we know, he might be a peace envoy whose

²⁸² *ibid.*, VIII, 563.

²⁸³ *ibid.*, *Republic*, VIII, 563.

²⁸⁴ Karl Popper (1945) *The Open Society and Its Enemies* (Abingdon: Routledge, 2005) p.137.

²⁸⁵ A theme that Plato develops in the *Theætetus*.

actions could stop the public disorder, or a photojournalist whose images might beneficially alert the world to the plight of the Larissans. By lying about the way to Larissa we have not only transgressed our deontic moral obligations but may have also caused consequential harm (as well as evading our epistemic duties and producing undesirable epistemic consequences).

Neither a deontological nor a consequentialist analysis helps much in this Larissan cameo, though. The deontological approach requires us to adjudicate between conflicting duties – those of truthfulness and benevolence – and Kant claims that truthfulness is a ‘perfect duty’, that is, an exceptionless one. Every lie, he asserts, ‘is objectionable and contemptible in that we purposely let people think that we are telling them our thoughts and do not do so’.²⁸⁶ To Kant, lying – *qua* insincerity – falls down on two counts: (i) It fails the test of the categorical imperative, in that we could not coherently will universal lying and (ii) it treats other humans as means to our ends, rather than as ends in themselves. Neither of these seems to apply to the current case, though: we are not contemplating a generalisation from our particular quandary to advocate universal lying (we merely wish to treat the present situation as exceptional), nor are we treating the enquirer as means to our own ends (we are acting, we hope, in concert with one of *his* own ends – that of self-preservation).

A consequentialist analysis is equally unsatisfactory. In order to justify misleading the enquirer, we need to be able to predict reliably the consequences of our actions: we need perfect knowledge of the entire context. Such comprehensive knowledge of causal chains is unavailable in all but the most simple of situations. One needs to appeal neither to chaos theory nor to quantum physics to show the implausibility of total predictability vis-à-vis human affairs. However, by having even slightly more knowledge than in the rather stark situation described – perhaps by knowing a few words of the enquirer’s language, or being able to perform a little mime act – we can apprise him both of the correct way to Larissa *and* also of the riot situation he will encounter should he still choose to venture there. This removes us from the need to reason consequentially: we have discharged both our epistemic duty and our moral one, and it is now up to the enquirer to exercise his informed autonomy in deciding whether or not to go to Larissa in the light of his newly-enhanced epistemic status.

²⁸⁶ Immanuel Kant (1778) *Lectures on Ethics* [tr. L.Infield] (New York: Harper Row, 1930, 1963).

The advantages of the *virtue* approach to our quandary is that it demands neither the strict adherence to the perfect duties embodied in deontology (at least on the Kantian construal) nor the perfect future knowledge needed for consequentialism. The question we ask is: what would a virtuous person do *in this situation*? If such moral defeaters (as in the riot scenario) do not intrude on our attempts at epistemic benevolence, then the transaction concerning Larissa proceeds felicitously. Our *sungnōmē* alerts us to the predicament of a fellow epistemic agent; we act from other-regarding virtue to resolve his quandary; our beneficiary is motivated by his own epistemic virtue (perhaps ‘being able to recognize reliable authority.’²⁸⁷) to acquire the knowledge he desires; and everyone is happy.²⁸⁸ The questions (i) “Which way is it to Larissa?” and (ii) “Is it advisable to go there?” are not the same, but in the event of the answer to the notional question (ii) being “No”, we we might consider that the right thing to do would be to mislead the enquirer about his actual question (i).

In the educational context, we are concerned to promote the learners’ flourishing – particularly their epistemic flourishing. This, not infrequently, involves benevolence and pedagogical sincerity combined with epistemic insincerity (in the sense of a mismatch between our beliefs and assertions). Elsewhere, I argue that many standard school science propositions such as ‘The visible spectrum consists of seven colours’ are not true.²⁸⁹ We know that they are not true, yet we promote them for the sake of future beliefs which are more congruent with reality.

Epistemically-justified Dissimulation

To justify insincerity on epistemic grounds is a species of consequentialism, since our expectation is that a misleading avowal now will be of benefit to the auditor later, in the form of enhanced epistemic status. We sacrifice short-term truthfulness in the interests of deferred, but fuller, doxastic gratification, and feel warranted in causing a temporary flaw in our beneficiary’s web of belief for the sake of its better integrity in the medium term. The virtue-epistemology version of consequentialism is a moderate reliabilism (such as Sosa’s), but this is not in complete alignment with present considerations, since it typically considers individual propositions rather than intricate

²⁸⁷ Zagzebski (1996) *Virtues of the Mind* (Cambridge: Cambridge University Press), p.114.

²⁸⁸ Quite literally happy, if Aristotle’s analysis is correct.

²⁸⁹ Seán Moran (2006) ‘Do we deal in knowledge in science lessons?’ *School Science Review*, 88 (322) pp.113-117, p.113.

webs of belief. We wish to help the learner to improve his overall web and are willing to compromise the truth of some individual propositions to achieve this. A recalibration may be in order here, re-defining epistemic virtue qua reliability as ‘that which leads to a better web of belief’, rather than Sosa’s ‘... a quality bound to help maximise one’s surplus of truth over error’.²⁹⁰ I recognise that defining ‘better’ here is somewhat problematic, but at least it improves on Sosa’s accounting metaphor, which implies that the sum of correct atomistic propositions (taking incorrect ones as negative in the overall reckoning) is important, not their organisation nor the learning trajectory of the web as a whole.

However, this notion of a virtuous, other-regarding epistemic agent being motivated to act in such a way as to encourage a medium-term enhancement of the belief web of her beneficiary – justifying a dispensation from the requirement for short-term truthfulness – is not without its difficulties. Walter Scott’s warning, ‘O what a tangled web we weave when first we practice to deceive’,²⁹¹ is pertinent in this regard. It is difficult enough to maintain the integrity of our doxastic own webs, so introducing temporary flaws or unravellings in others’ webs – for the claimed sake of future improvements – is an action fraught with risk. Since our intentions are medium-term, we will need to be able to remember in detail, over a prolonged time-period, the layout of the relevant parts of all of our beneficiary’s webs – in particular the location of the flaws we have deliberately introduced. As Quintillian puts it: ‘the common saying that “a liar should have a good memory” is very true’.²⁹²

This adds a degree of complexity to the overall epistemic situation which puts it beyond consequentialist analysis and into the realm of the radically unpredictable. We have our own webs of belief, but we are also nodes in the wider community’s epistemic web, some nodes of which have personal webs that temporarily suffer from flaws which we have introduced: flaws which are at odds with our own beliefs, but which we hope will enable our intended epistemic beneficiaries to build better webs.

Furthermore, these individual and community webs of belief interact with one another

²⁹⁰ Ernest Sosa (1985) ‘Knowledge and Intellectual Virtue’, *Monist*, 68, No.2 (April) p.227.

²⁹¹ Walter Scott (1808) *Marmion*. In this long poem, the English aristocrat Marmion induces a nun – Constance de Beverley – to escape her French convent and accompany him on his travels, disguised as a page-boy. Constance is subsequently captured and executed for breaking her vows.

²⁹² D.A. Russell (2001). *Quintilian: The Orator’s Education*, bks. I to XII. (Cambridge, Massachusetts: Harvard University Press). In Paul O’Neill (2008) *The Educational Theory of Quintilian (Marcus Fabius Quintilianus)* NewFoundations [online] Available at: <http://www.newfoundations.com/GALLERY/Quintilian.html> [Accessed July 2009] bk.IV, p.265.

(via testimony), with the physical world (via empirical experience) and with reason, memory, emotion and aesthetic sensibility. Clearly, any attempt at precise consequentialist (that is, reliabilist) analysis is doomed to fail in such a chaotic²⁹³ milieu.

A more Aristotelian version of intellectual virtue, as promoted by Zagzebski, is better able to explain good epistemic action in this complex arena. The *phronimos* is able to live with uncertainty in *praxis* and thus attempts to do the right thing, based on a cultivated (though fallible) discernment and a desire to do good. In our timely interventions – using our sense of *eukairos* (see p.138) – we spot the opportune moment to repair or disrupt someone’s web and act with just the right degree of other-regarding force. In the event of any uncertainty over this, the default *epistemic* action for the virtuous epistemic agent is sincere testimony. We have a *prima facie*, pro tanto, virtuous disposition to tell what we regard as the truth. However, even on those occasions in which our *phronēsis* indicates the desirability of well-intentioned dissimulation (when we put what we consider to be the best interests of our interlocutors above their access to our thoughts) we are not thereby, in the eyes of some, totally exculpated:

If a *prima facie* duty is outweighed or overridden, it does not simply disappear or evaporate. It leaves what Robert Nozick calls ‘moral traces’. The agent should approach such a decision conscientiously and should expect to experience regret and perhaps even remorse at having to override and infringe this *prima facie* duty.²⁹⁴

This is interesting language, expressing something almost akin to religious notions of sin. We have chosen the lesser of two evils, and have therefore acted virtuously: but we have still chosen the ‘evil’ of insincerity and thus have sinned. Thomas Aquinas’ analysis, in his *Summa Theologica*, is particularly useful in defending a nuanced view of such ‘sins against truth’, which draws on Aristotle (and also Augustine). He develops a hierarchy of types of lies, with ‘mischievous’ lies against God being the most serious, and those intended to save someone from ‘unlawful defilement of his body’ being the least serious.

²⁹³In the sense of being a complex system.

²⁹⁴TL Beauchamp & JF Childress (1989) *Principles of Biomedical Ethics*, 3rd Edn. (New York: Oxford University Press) p.5. The Nozick quotation is from Robert Nozick (1968) ‘Moral Complications and Moral Structures’, *Natural Law Forum*, 13, pp.1-50.

Aquinas regards the key characteristic of a lie as being a discrepancy between (i) what is in the agent's mind and (ii) what he says – and not a lack of congruence with the world. This, in turn, relies on his interpretation of the Aristotelian distinction between essences and accidents.²⁹⁵ The worldly congruence of the agent's belief is accidental, for this is beyond the scope of his will, but:

the essential notion of a lie is taken from formal falsehood, from the fact namely, that a person intends to say what is false; wherefore also the word '*mendacium*' [lie] is derived from its being in opposition to the 'mind'.²⁹⁶

Having agreed with Aquinas that insincerity (and not untruth) is the signature of lying, we look next to his discussion for possible exculpations of the various types of well-meaning deception to which teachers are prone. Aquinas explicitly seeks to diminish the apparently unambiguous warning of *Psalms 5:7*, 'Thou wilt destroy all that speak a lie', by developing a taxonomy of lying, sorted by sinfulness:

Now the sin of lying is aggravated, if by lying a person intends to injure another, and this is called a 'mischievous' lie, while the sin of lying is diminished if it be directed to some good – either of pleasure and then it is a 'jocose' lie, or of usefulness, and then we have the 'officious' lie, whereby it is intended to help another person, or to save him from being injured.²⁹⁷

This is a relief, perhaps, to many teachers, who use jocularity in their teaching, or who utter what are technically 'officious' lies in order to promote learning. Furthermore, the 'jocose' lie is shown by Aquinas not to be a sin at all, for it fools no one and does not arise from a malign desire to mislead:

...not every lie is a cause of deception, since no one is deceived by a jocose lie; seeing that lies of this kind are told, not with the intention of being believed, but merely for the sake of giving pleasure. Hence again we find hyperbolic expressions in Holy Writ. Therefore not every lie is a sin.²⁹⁸

Other types of lying are still to be regarded as sinful, but not mortally so, for 'a mortal sin is, properly speaking, one that is contrary to charity', thus 'officious lies are not mortal sins' because they are committed with the best intentions of the auditor at heart. A consideration of intellectual virtue may excuse epistemic insincerity which is well motivated, for:

²⁹⁵ There is some reification occurring here, for a lie is not traditionally a 'thing', so notions of essence and accident are being used in a parallel, but I feel plausible, way.

²⁹⁶ Aquinas, op. cit.

²⁹⁷ *ibid.*, Q.110, art.2.

²⁹⁸ *ibid.*, art.3.

...it is evident that the greater the good intended, the more is the sin of lying diminished in gravity. Wherefore a careful consideration of the matter will show that these various kinds of lies are enumerated in their order of gravity: since the useful good is better than the pleasurable good, and life of the body than money, and virtue than the life of the body.²⁹⁹

Aquinas indicates here that in pursuing the highest good for another (that is, his virtue) our deceptions are greatly diminished in gravity. This is significant for us as teachers, and it is of a piece with Martineau's and Slote's line on benevolence. Furthermore, since our aspirations relate not to money, nor pleasure, nor the body, but to intellectual virtue, our 'sinfulness' turns out to be minuscule on Aquinas' analysis. We are not Hume's 'sensible knaves',³⁰⁰ for we are not seeking personal profit but the medium-term epistemic flourishing of others.

Childhood Myths

One rather peculiar phenomenon, which we can bring under Aquinas' category of the 'jocose' lie, is the false stories and explanations commonly told to young children. Between the ages of three and eight, the majority of children consider such fantasy figures as Santa Claus, the Tooth Fairy, unicorns and monsters to be real.³⁰¹ These false beliefs have their origin in family rituals (secretly biting the carrot left for Rudolph and the mince pie for Santa; replacing a deciduous tooth beneath a child's pillow with a few Euro) and in popular culture (An Post replying to letters addressed to Santa; dentists giving children special boxes in which to keep their lost teeth until the Tooth Fairy's nocturnal visit.) Such practices, combined with implied penalties for scepticism on the part of the young auditor, constitute a widespread conspiracy to engender false beliefs by means of insincere, but consistent, testimony. Motivations for such deceit range from the innocent pleasure experienced by parents and children in spinning these webs of fantasy and magic, to hard-nosed marketing that cynically taps into the selling power of myth.

²⁹⁹ *ibid.*, art.2.

³⁰⁰ Who believe that 'honesty is the best policy, may be a good general rule, but is liable to many exceptions; and he, it may perhaps be thought, conducts himself with most wisdom, who observes the general rule, and takes advantage of all the exceptions.' David Hume (1777) *An Enquiry Concerning the Principles of Morals* (Teddington: The Echo Library, 2006) p.76. Hume thinks that the knave's attitude is mistaken, for he has to live with himself after compromising his character 'for worthless toys and gewgaws'.

³⁰¹ Extensive empirical evidence for this is cited in Gabrielle Principe and Eric Smith (2008) 'The Tooth, the Whole Tooth and Nothing But the Tooth: How Belief in the Tooth Fairy Can Engender False Memories.' *Applied Cognitive Psychology*, 22, p.626.

Some of these myths are so firmly embedded that any attempt at iconoclastic *parrhesia* would be likely to incur significant disapprobation. Consider, for example, the reactions of a young child's teacher and classmates to his report that, "My Dad says there is no Santa." This objective truth is likely to be dismissed with the pragmatic advice that, "If you don't believe in Santa, you won't get any presents." This, then, sets up a rather cynical disposition to fake the holding of certain beliefs because of their instrumental utility rather than their known truth or, worse perhaps, inculcates a meta-belief that highly-implausible things and events can become true as a result of fervently believing them to be so. It could be argued, however, that these are both valuable insights which may benefit the tyro knower. Strong belief contrary to the objective evidence (for example, that one will win a race against an apparently superior field) could well play a part in the desired event actually coming to pass (winning the race, against the odds). Moreover, it would take a flinty-hearted parent to deny children their innocent enjoyment of the Santa myth, while at the same time alienating them from their classmates. This would seem to constitute acting against charity for the sake of epistemic rectitude, for there is a sense in which Santa has a sort of reality, and the concept of freely-given gifts has theological overtones.

Nevertheless, there can be serious consequences to deliberately blurring the lines between imagination and reality (lines which may be blurred enough already, without further help). Children possessed of baroque mental constructions based on the Tooth Fairy myth, including full descriptions of fantastical events firmly believed to have been personally experienced, have then gone on to allege that their pre-school teacher has turned classmates into mice, taken them on trips to outer space, or worse.³⁰² Furthermore, having spurious beliefs in one's web may have effects on future epistemic activity, beyond that closely associated with the belief. A propensity for unwarranted supernatural explanations which continues into adulthood may be one such fall-out of 'Santa' and 'Tooth-Fairy' indoctrination. On this topic, Blackburn quotes Voltaire: 'Those who can make you believe absurdities can make you commit atrocities'.³⁰³

If we are to continue presenting as veridical tall tales such as these, Blackburn's concern needs to be addressed. Two criteria, I suggest, might govern the acceptability

³⁰² These allegations featured in the notorious Wee Care Nursery School and Little Rascals Day Care abuse scandals in the USA. (Reported in: Principe and Smith (2008) op. cit., p.625). All of the accused were eventually exonerated, but some served part of their prison sentences first.

³⁰³ Simon Blackburn (2005) *Truth: A Guide for the Perplexed* (London: Penguin Books).

of such stories: (i) The myth is *in itself* at least not harmful,³⁰⁴ and preferably of benefit to the auditor and (ii) The auditor's doxastic web is enhanced, either immediately or at some point in the future, by believing in the story. The first criterion relates to our general principle of benevolence and the second involves the consequences of the epistemic input. We have seen that the Santa myth *per se* is harmless – or even theologically beneficial – so it 'passes' the first criterion (the same cannot be said of the message in the tooth fairy story that there are shadowy individuals prepared to pay for human body parts). So how might it meet the second criterion by enhancing the auditor's web of belief?

As we discussed earlier (p.82), a naïve credulity is a necessary condition for learning one's native tongue in childhood. We generally accept the testimony of our elders unreservedly – at least in their naming of things – for this is the only entry point to eventual linguistic proficiency. However, to continue this trait of passive acceptance of what we are told into adulthood, even in the presence of the standard warning signs of deception or mistake, is a dangerous disposition which needs to be replaced by a more epistemically-astute approach. In other words, we need to acquire a sensitivity to both mendacity and epistemic incompetence. A safe way in which this can happen is to be exposed to a harmless myth in childhood (e.g. a benevolent Santa, who rewards our good behaviour) which adults present as true, but which later turns out to be false. In seeing through this deception, the child learns the valuable lessons that (i) not all testimony is to be trusted and – straining things a little here perhaps – that (ii) there is no guarantee that virtuous behaviour will attract an external reward. To the pedagogical constructivist, this is an admirable technique. By experiencing deceit, the learner can construct the concept of deceit for himself; a much more engaging and effective learning experience than being simply told the proposition 'people sometimes lie in a convincing way.' Thus, it is desirable in the educational context that some false propositions are on offer, in order that the learner can lose the dangerous disposition of naïve credulity. Later (p.264), I suggest some ways in which this can be achieved, including by the use of virtual testimony.

For the virtue epistemologist, the notion of *kairos* can also be invoked, in that an opportune intervention in the web of belief of the child is made which by-passes the

³⁰⁴ For example, a parent threatening a young child that the 'bogy man' will come for him if he doesn't go to sleep would involve a potentially harmful myth, which could cause nightmares and anxiety.

autonomy of the individual in the short term, and introduces false beliefs. His epistemic autonomy will be strengthened in the long run, however, for once the Santa deception is uncovered, the desirability of using his own judgement circumspectly in assessing future knowledge claims becomes more apparent. In the case of more complex and sustained interactions (typified by those taking place in a fairly stable web of epistemic agents such as we might find in a classroom or seminar-room), this notion of timeliness is a significant one.

The Importance of Timely Intervention

The idea that there is a propitious time for any action has a long history. For example, in *Ecclesiastes* 3, we have the advice that ‘there is a time for everything’, including the epistemically-relevant references to ‘a time to search and a time to give up’ (3.6) and ‘a time to be silent and a time to speak’ (3.7). If we read it metaphorically, 3.7 can also apply to our work with webs of belief: ‘a time to tear and a time to mend.’

The Greek concept of *καιρός* (from Kairos, the grandson of Chronos) encapsulates the same theme. *Eukairos* signifies the right time to do something; *kakakairos* is the wrong time; *akairos* is a time without opportunity.³⁰⁵ Eric Charles White’s description of *kairos* (which we can take in the sense of *eukairos*) is worth quoting at length, because it incorporates beautifully two metaphors which are significant to the present work: images from archery of hitting the target, and the notion of beliefs forming a fabric or web.

Kairos is an ancient Greek word that means ‘the right moment’ or ‘the opportune’. The two meanings of the word apparently come from two different sources. In archery, it refers to an opening, or ‘opportunity’ or, more precisely, a long tunnel-like aperture through which the archer’s arrow has to pass. Successful passage of a *kairos* requires, therefore, that the archer’s arrow be fired not only accurately but with enough power for it to penetrate. The second meaning of *kairos* traces to the art of weaving. There it is ‘the critical time’ when the weaver must draw the yarn through a gap that momentarily opens in the warp of the cloth being woven. Putting the two meanings together, one might understand *kairos* to refer to a passing instant when an opening appears which must be driven through with force if success is to be achieved.³⁰⁶

³⁰⁵ Philip Sipiora (2002) ‘Introduction: the Ancient Concept of *Kairos*’, Philip Sipiora & James S Baumlin (eds.) (2002) *Rhetoric and kairos: essays in history, theory and praxis* (Albany: SUNY Press) p.2, p.19.

³⁰⁶ Eric Charles White (1987) *Kaironomia: On the Will-to-Invent* (Ithaca, USA: Cornell University Press) p.13 quoted in Philip Sipiora & James S Baumlin (eds.) (2002) *op.cit.*, pp.17-18.

White's analysis is interesting, in that it adds the idea of force to that of timeliness, and this is highly significant if we apply it to present considerations of other-regarding epistemic virtue. An opportune intervention in the web of belief of another epistemic agent needs to be strong enough to have the intended effect. The problem with this is that such forceful weaving may well by-pass the autonomy of the individual in an undesirable way. We might be able to compel our students to acquire a true belief by means of a vivid and timely intervention, but we need to take care that such compulsion does not stray over the line that separates virtuous education from well-intentioned brainwashing. This is a familiar theme in criticisms of the Sophists:

Georgias the Sicilian ... glorifies the *magic* effects of the *word* (*goetia psychagogia*), and teaches and explains that the rhetor must know, scientifically, the ways to the soul, from which the speeches capable of *spellbinding* and *persuading* descend.³⁰⁷

But another point of view is that the Sophists, because of the formulaic nature of their *technē*, were lacking the attunement and flexibility needed to promote learning: 'One of the reasons for the general ineffectiveness of the Sophists, according to Isocrates, is their inability to recognize the *kairik* exigencies of particular discourses'.³⁰⁸ So *kairos* seems to be a necessary but not sufficient feature of effective education. For virtuous education, the motivation for its use, and the manner of its deployment must also be virtuous and not just effective. The question of motivation is not a straightforward one, however, for, as we have seen, our *kairik* intervention may have a long-term epistemic pay-off for the beneficiary, even though the immediate effect might be one of his acquiring a false belief.

As well as temporarily deluding others for the sake of enhancing their longer-term epistemic status, there may be times when deluding ourselves is, paradoxically, the only way to achieve certain desiderata. An egoistic epistemic agent with a clear agenda will not always get what he wants: indeed, the very pursuit of the agenda may disbar him from achieving it.

³⁰⁷ Augusto Rostagni (2002) [tr. Philip Sipiora] 'A New Chapter in the History of Rhetoric and Sophistry', in Philip Sipiora & James S Baumlin (eds.) (2002) op. cit., p.24 [Emphasis in original].

³⁰⁸ Philip Sipiora (2002) 'Introduction: the Ancient Concept of *Kairos*', Philip Sipiora & James S Baumlin (eds.) (2002) op. cit., p.9.

Taking Indirect Routes to Knowledge

In exploring this paradox, we can discern parallels in the older field of virtue ethics which might be helpful to virtue epistemology, and some of the problems for the egoistic hedonist have already been analysed in the former field. For example, Michael Stocker suggests that in traditional ethical theory we exhibit a ‘schizophrenia’ between our motives and our reasons for carrying out a particular act, a lack of harmony which virtue ethics is in a position to address. Two points need to be made about Stocker’s thesis: (i) His use of the term ‘schizophrenia’ is unfortunate, for the mental health metaphor he seeks is more like ‘split personality disorder’,³⁰⁹ (ii) By ‘reasons’ he intends to include both justifications and values. According to Stocker, in the very act of pursuing certain ends unambiguously as hedonistic egoists, we bar access to those ends, for:

Love, friendship, affection, fellow feeling and community are important sources of personal pleasure. But can such egoists get these pleasures? I think not – not so long as they adhere to the motive of pleasure-for-self.³¹⁰

This has important consequences for virtue epistemology, if the notion finds a home there. In particular, a too-direct pursuit of ‘knowledge’ (for example, by means of memorising chunks of a revision guide as sole preparation for an examination) may make us miss the target. Being too nakedly goal-seeking deprives us of the possibility of achieving the epistemic good of genuine knowledge. Stocker’s own example asserts that seeking love for the pleasure it might bring is too selfish to achieve the very aim it seeks, and will thus deprive the seeker of the possibility of love (and also the consequent pleasure or reward). Furthermore, the object of love is being treated as essentially replaceable – having only to meet the criterion of bringing about the pleasures associated with love.

So too with knowledge. If we pursue it too single-mindedly and selfishly, we miss out on the pleasures of acting from other-regarding motives (in two senses of the term ‘other’ and two senses of the term ‘regarding’, as I discussed earlier [p.120]) and,

³⁰⁹ Which the standard taxonomy of mental illness has renamed ‘Dissociative Identity Disorder’. APA (2000) *Diagnostic and Statistical Manual of Mental Disorders* [4th edn.] DSM-IV (Arlington, VA: American Psychiatric Association) p.529.

³¹⁰ Michael Stocker (1976) ‘The schizophrenia of modern ethical theories’, *Journal of Philosophy*, 73, pp.563-66. Reprinted in Crisp & Slote (eds.) (1997) op. cit., p.68.

furthermore, fail to acquire the very knowledge we seek.³¹¹ Simplistic technical rationality would find this notion of ‘indirection’ absurd, of course: ‘getting what we want by seeking something else’³¹² is precisely the opposite of the ends-driven technicist approach.³¹³ In the epistemic field, the ‘schizophrenia’ of village technical rationality leads to insincerity, since when gripped by this condition the student believes that the knowledge (c.f. person) has value not in itself but only in respect of the rewards it can bring him. He also considers the specific knowledge (or particular person) to be a sort of placeholder, which could be filled by a number of equally-useful ‘facts’ (or persons). They have no value per se, but only insofar as they are vehicles to pleasure. Such ersatz ‘knowledge’ acquisition, in which the putative knowledge is neither justified nor loved for its own sake but only as an interchangeable means to an end, is not uncommon, it seems to me. On the other hand, giving ourselves over to knowledge, perhaps by being part of an epistemic community, will allow us to acquire knowledge in a more deserving, richer way than by single-mindedly pursuing it, and shows that we value it for its own sake rather than for the external benefits which can follow in its wake. We acquire knowledge virtuously by engagement, not by seizure.

If we shift the focus to teachers, we can see that supporting such learner engagement in an other-regarding way is a more worthy activity than the efficient technicist delivering of tightly-prescribed syllabi which outcomes-focused accountability and inspection regimes foster. Recent empirical work in Ireland by Mark Morgan, Michael O’Leary and others found that teachers *do* subscribe to an other-regarding *modus vivendi*, as

the events that motivate teachers on a day-to-day basis are grounded in their reasons for becoming teachers in the first place, i.e. ‘making a difference’. Thus, factors like ... student engagement in learning can be regarded as experiences that stem directly from the motivation to enter teaching.³¹⁴

³¹¹ Dunne quotes Newman on this theme: ‘There are no short cuts to knowledge; nor does the road to it always lie in the direction in which it terminates, nor are we able to see the end on starting ... No one can go straight up a mountain; no sailing vessel makes for port without tacking ...’. John Henry Newman (1852) *The Idea of a University*, p.230, in Joseph Dunne (2006) ‘Newman Now: Re-examining the Concepts of “Philosophical” and “Liberal” in The Idea of a University’, *British Journal of Educational Studies*, vol.54, no.4, pp 412–428, p.421.

³¹² Stocker (1976) *ibid.*, p.75.

³¹³ A very recent book, however, suggests that such ‘obliquity’ – as the author terms it – is also good for business. John Kay (2011) *Obliquity: Why our Goals Are Best Achieved Indirectly* [paperback] (London: Profile Books Ltd.)

³¹⁴ Mark Morgan, Larry Ludlow, Karl Kitching, Michael O’Leary & Aleisha Clarke (2010) ‘What makes teachers tick? Sustaining events in new teachers’ lives’, *British Educational Research Journal*, vol.36, no.2, pp.191–208, p.201.

We would be falling into the naturalistic fallacy were we to adduce this empirical fact as a justification for promoting the desirability of engagement, but since the recommendation comes from philosophical arguments, this represents a benign confluence of normative and empirical considerations. Building on the intrinsic motivation of the profession is not only a more virtuous project than focusing on ‘the philosophy of performativity’, it will also do much to avoid the ‘unintended negative consequences, which are evident in loss of morale and job satisfaction’, as Morgan *et al.* put it.³¹⁵

Conclusions of Chapter 3

This chapter has examined the notion of other-regarding virtue in general and has set out a nuanced view of the novel idea of other-regarding, specifically *epistemic* virtue. The teacher’s being animated by such virtues assists the learner to achieve enhanced cognitive contact with reality. Our other-regarding virtue is enhanced by a continued engagement with knowledge – a process that requires us to act from self-regarding epistemic virtue.

The archetypal credulity-veracity pairing has been explored in detail, as a representative of a larger class of tallying propensities. While straightforward truth-telling ought to be the norm for teachers, we need to exercise our *phronēsis* to find the happy medium between saying too much (a garrulous *parrhesia* or an over-emphatic boasting, *alazoneia*].³¹⁶) and too little (a self-deprecating *eirōneia*). Neither should we be epistemic saints. Childhood mythologising, partial truth-telling, indirection, dissimulation and oversimplification may all be used as *skopic* routes to the longer-range *telos* of enhanced cognitive contact with reality. This blurring of the lines between what we see as reality and what we encourage our beneficiaries to believe for the time being can be a dangerous practice, however, and as teachers we ought to resist any temptation to overuse our *kairik* powers of ‘spell-binding’. In this regard, virtue simpliciter has unavoidably (and fittingly) encroached on the project of promoting epistemic virtue, in the shape of the moral virtue of benevolence taking a leading role in regulating teachers’ other-regarding epistemic conduct. Although the notion of an

³¹⁵ Morgan *et al.* (2010), p.202

³¹⁶ Aristotle, *Nicomachean Ethics*, 1127a13-15.

autonomous learner has been questioned, respecting the autonomy of the learner qua person ought to remain a key principle in the learning situation. The importance of achieving an attunement with those whose epistemic predicaments we wish to help ameliorate, before intervening in a timely and virtuous way, has also been demonstrated.

A strict definition of an act of other-regarding intellectual virtue was built on criteria suggested by Kawall, who in turn draws on Zagzebski. This requires that it be properly-motivated, generally successful in achieving its pedagogical aim, and that it give pleasure to both the teacher (whose well-ordered affect causes her to respond correctly to the exercise of the virtues) and the taught. A more wide-angled view of our role sees us located in an epistemic web characterised by a range of reciprocities and asymmetries. The criteria here are not as amenable to checking, but our interventions need to have some beneficial effect on the field or the epistemic community. In an educational setting, this would involve a degree of uptake by at least some of the learners, viewed diachronically. While this attaining of ends is important, so too is the doxastic engagement of the learners: this is what gives the *praxis* of teaching its meaning to the practitioners. Promoting such virtuous interaction is good for the intellectual flourishing of the students and produces positive affect in the teachers, protecting the latter from the technicist-induced ‘feeling of being under a disciplinary regime which, in turn, results in negative emotions including fear, anger and disaffection’.³¹⁷

During teaching and learning, the intellectual virtues demanded of teacher and learner are not typically identical, but they should interlock like gear-wheels. It is up to the teacher to promote this interlocking, an example of which appears on p.245 in the case of the Social Epistemic Virtues. This is not a simple matter, however, for over-using particular combinations may allow others to seize up. For example, the co-ordinate virtue to the learner’s virtue of ‘being able to recognize reliable authority’³¹⁸ is intellectual candour on the part of the teacher (See Appendix B for a table showing how these co-ordinated virtues might look) and this straightforward credulity-and-veracity configuration ought, as we have seen, to be the default gearing in the

³¹⁷ Morgan *et. al.*, (2010) p.202

³¹⁸ Zagzebski (1996) *Virtues of the Mind*, p.114.

classroom. However, despite the comfort of this interlocking, and the immediate doxastic torque to be obtained, the under-use of other virtuous combinations is detrimental to the epistemic *telos*, in that they will have rusted through disuse when later required. The ideal is to use other configurations, without the teacher depleting her own epistemic reputation to the extent that the trust which supports classroom doxastic interactions is undermined. For example, to promote ‘reflexive critical openness’³¹⁹ in the learner, the teacher might be animated by provocativeness.³²⁰ To encourage intellectual boldness, she may exercise the *maieutic* virtues.³²¹ A fuller discussion of these tallying virtues is to be found in chapters 5 and 6.

³¹⁹ Miranda Fricker, *op. cit.*

³²⁰ Plato, *Republic*, 523b-c

³²¹ Plato, *Theaetetus* 149-152

Chapter 4 - Reliabilist Virtue Epistemology and Education

Introduction

In this chapter, I begin to develop further the key themes of virtue epistemology, which I have already identified, described and extended, in order to elaborate and defend a virtue approach to teaching and learning.

This project is one which has not been attempted in any substantial way by the virtue epistemologists themselves. Since it is such a new field, the attention naturally tends to focus on the emerging epistemological theories rather than on their implications for practice. Virtue epistemologists Robert Roberts and Jay Wood (2007) pay more attention to education than most, by devoting two-and-a-half pages to ‘Teaching and Learning’ in their book *Intellectual Virtues*, but the insights they offer on this topic are quite limited. They stress the importance to learners of possessing ‘what the medievals called the virtue of docility or teachableness’,³²² and ‘a disposition to respect the teacher both as a human being and for what she knows, and to be grateful to her for what she imparts’. The teacher is to deploy ‘gentleness’,³²³ for she will thus ‘at the end of the day ... have transmitted more epistemic goods than her harsher counterpart.’ ‘Teaching’ is about ‘passing intellectual goods on from the less ignorant to the more ignorant’.³²⁴ The authors’ somewhat Confucian educational scenario – of benighted students infused with filial piety directed towards the teacher as a fount of wisdom, who gently ‘imparts’ her knowledge to them – would make for a pleasant working environment for teachers. However, whether this is a good way of cultivating virtue and developing the learners’ webs of knowledge is open to doubt.

Richard Paul contributes a short chapter entitled ‘Critical Thinking, Moral Integrity, and Citizenship: Teaching for the Intellectual Virtues’ to Guy Axtell’s (2000) *Knowledge, Belief and Character*. He is critical of the negative effects of the

³²² Robert Roberts & Jay Wood (2007) *Intellectual Virtues; an Essay in Regulative Epistemology* (Oxford: Oxford University Press), p.142

³²³ Although Roberts and Wood do not mention the fact, ‘Gentleness’ is, we recall, one of the ‘crowning’ teacherly virtues of Agathon/De La Salle.

³²⁴ Roberts & Wood (2007) op. cit., p.293

‘intellectual arrogance’³²⁵ that can result from a shallow learning based on algorithms and unreflective memorisation. His main interest here is in promoting the virtues of fair-mindedness and intellectual humility as a basis for moral education. Howard Gardner’s latest book (published April 2011) is subtitled *Educating for the Virtues in the Twenty-First Century*,³²⁶ but it makes no mention at all of virtue epistemology and does not exploit any of the insights of Sosa, Zagzebski, Nozick, or the other reliabilist and responsibilists whom we have discussed.

Only a small number of peer-reviewed journal articles deal with the implications of the intellectual virtues for education. Christopher O’Toole (1938), in his ‘The Teaching of Intellectual and Moral Virtues’, tells us that ‘To teach, therefore, is to impart truth’,³²⁷ and takes a simplistic approach to Aristotle’s analysis of the different aetiologies of the intellectual and moral virtues: ‘Intellectual virtues, then, can be taught directly. The student can enter a classroom, and after an hour’s work he can come away knowing several important intellectual principles’.³²⁸ William Abraham (2006), a theologian, warns that an educational goal ‘of social transformation [can] morph into the fostering of intellectual vice’.³²⁹ Drawing briefly on Zagzebski, and on Sosa’s earliest work in the field, he makes an argument for seminaries adopting a working model of improving intellectual excellence and eliminating intellectual vices ‘like wishful thinking, obtuseness and parochialism’.³³⁰ Ryan Bevan (2009) suggests that ‘citizenship education in particular can benefit greatly from this more expansive theory [i.e. virtue epistemology] with concrete pedagogical implications’.³³¹ However, he quotes neither Sosa nor Zagzebski and mentions the work of virtue epistemologist James Montmarquet only by way of introducing the virtues of ‘impartiality, the virtues of intellectual sobriety, and the virtues of intellectual courage’.³³²

³²⁵ Richard Paul (1993) *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*, pp.319-332 (Sonoma: Foundation for Critical Thinking) reprinted as ch.13, Guy Axtell (ed.) (2000) *Knowledge, Belief and Character* (Lanham, Maryland: Rowman & Littlefield). p.164.

³²⁶ Howard Gardner (2011) *Truth, Beauty and Goodness Reframed: Educating for the Virtues in the Twenty-First Century* (New York: Basic Books)

³²⁷ Christopher J. O’Toole (1938) ‘The Teaching of Intellectual and Moral Virtues’, *Ethics*, vol.49, no.1, pp.81-84, p.81. To be fair to him, we note that this was written well before the advent of contemporary virtue epistemology.

³²⁸ *ibid.*, p.82.

³²⁹ William J. Abraham (2006) ‘Education, Transformation and Intellectual Virtue’, *Christian Higher Education*, 5, pp.3-19, p.3.

³³⁰ *ibid.*, p.16.

³³¹ Ryan Bevan (2009) ‘Expanding Rationality: The relation between epistemic virtue and critical thinking’, *Educational Theory*, vol.59, no.2, pp.167-179, p.167.

³³² *ibid.* p.177

We see, then, that the conversation between virtue epistemology and education has been limited, and confined mainly to citizenship and moral education. The small amount of discussion that has taken place has been restricted to the neo-Aristotelian responsibilist variety, has virtually ignored the insights of Sosa's reliabilist strain, and typically involves proposing a list of the intellectual virtues to be cultivated in educational settings. The remainder of this thesis thus concerns itself with the question, 'How can virtue epistemology of both main types (that is, reliabilist and responsibilist) be exploited to inform the practices of teaching and learning in general (that is, not only moral and citizenship education)?'

I start with Sosa's version of virtue epistemology – virtue reliabilism³³³ – which seems to have received no attention at all from educationalists (unless we include the passing mention by Abraham). In his most recent work, (2011) Sosa describes teachers as mouthpieces for institutionalised information,³³⁴ so his own educational insights, unlike his epistemology, may be considered to be of limited value. I evaluate the extent to which his epistemic model stands up when considering not just the act of acquiring an isolated true belief reliably, but also the overall learning process of belief revision. I show that in education it is not only Sosa's 'accurate, adroit and apt'³³⁵ hitting of true proposition p which is important, but also an engagement with the counterfactual class of propositions such that $\sim p$. Furthermore, by using some principles drawn from artificial intelligence theory, I connect reliabilist notions of knowledge to the active processes of learning qua web-modification.

This work shows that in the mature epistemic agent the warrant for p ought generally to be learned alongside proposition p itself. The warrant can protect p from *unwarranted* hostile epistemic input. If there is a challenge strong enough to overcome p 's particular degree of epistemic entrenchment, however, it will cause the justified derogation of p in favour of $\sim p$ from the learner's belief-corpus, C . Because of the nature of the arguments deployed, there is an unavoidable core of symbolic manipulation, using some elements of formal logic and artificial intelligence theory, which occupies the

³³³ Sosa describes his own approach as 'virtue *perspectivism*', but Guy Axtell places Ernest Sosa, John Greco and Alvin Goldman in the camp of 'virtue *reliabilism*', and I feel that Sosa's close connections with Nozick's reliabilism makes Axtell's a plausible taxonomy. [Axtell (2001) quoted in Robert Lockie (2008) 'Problems for virtue theories in epistemology' *Philos. Stud* 138: pp.169-191].

³³⁴ Sosa (2011) op. cit., p.47

³³⁵ Sosa (2007) *A Virtue Epistemology. Apt Belief and Reflective Knowledge*, vol.I (Oxford: Oxford University Press), p.22.

middle part of the chapter. This is framed by more obviously educational concerns at the beginning and towards the end, but the theme of epistemically reliable and virtuous education runs throughout.

Aims of Education

Before conducting a conversation between the reliabilist construal of virtue epistemology and education, it is useful to consider briefly what the aims of the educational project might be. There is a lack of unanimity on this question, as can be seen by a cursory advertence to a handful of writers on the topic. A.N. Whitehead, for example, in *The Aims of Education*, proposes that ‘the essence of education is that it be religious ... an education that inculcates duty and reverence’.³³⁶ A.S. Neill takes the view that education should ‘make people happier, more secure, less neurotic, less prejudiced’, Jean-Jacques Rousseau believes that educational aims ‘come into accord with the teaching of nature’, and Sergei Shapovalenko insists that the aim of education ought to be ‘to inculcate the materialist outlook and communist mentality’.³³⁷ Matthew Arnold sees education as a liberal introduction to ‘the best that has been thought and said in the world’.³³⁸ John Henry Newman takes the aim of a university education to be ‘Knowledge ... not merely a means to something beyond it, or the preliminary of certain arts into which it naturally resolves, but an end sufficient to rest in and to pursue for its own sake’.³³⁹ Howard Gardner, as we have already noted, claims that education should nurture what he terms the ‘classical virtues’³⁴⁰ of truth, beauty and goodness.

These are substantial and important ideas, and to do them justice would take much discussion. My reason for listing them is to show that education is a contested topic. Whether or not it is ‘essentially contestable’, though, is a different matter, for, as David Carr puts it, ‘even though many of the issues and questions of education are not

³³⁶ A.N. Whitehead (1962) *The Aims of Education and Other Essays* [paperback edn.] (London: Ernest Benn Ltd), p.23.

³³⁷ K. Harris (1999) ‘Aims! Whose Aims?’ in R. Marples (ed.) *The Aims of Education* (London: Routledge) p.1. Quoted in Paul Standish (2006) ‘The Nature and purposes of Education’, Randall Curren (ed.) (2006) *A Companion to the Philosophy of Education* (Oxford: Blackwell Publishing).

³³⁸ J. Gribble, 1967, quoted in David Carr (2009) ‘Revisiting the Liberal and Vocational Dimensions of University Education’, *British Journal of Educational Studies*, vol.57, no.1, pp.1-17, p.3.

³³⁹ John Henry Newman *The Idea of a University* [online] available at <http://www.newmanreader.org/works/idea/discourse5.html> [accessed 20 April 2011]. ‘Discourse 5. Knowledge its Own End’, section 2.

³⁴⁰ Gardner (2011) op. cit., p.13. In the present thesis, truth, beauty and goodness are viewed not as virtues but as the transcendentals towards which the epistemic, æsthetic and moral virtues aim.

decidable on theoretically (or empirically) neutral or normatively disconnected grounds ... there is nevertheless the distinct possibility of arriving at better or worse practical decisions and policies on such questions'.³⁴¹ When governments make attempts at defining such policies and aims, they typically frame education in instrumental terms, by asserting that the populace needs to be well educated in order that the country might compete economically with the rest of the world:

In today's global economy, in which our national competitiveness increasingly depends on the skills of each and every person ... [t]oo many young people are unattractive to employers; deficient in the basics of English and maths, unprepared for further study; and unable to demonstrate their true potential.³⁴²

However, in a pluralist society, this issue is not a straightforward one to settle, so government claims that all of the contesting views of the aims of education are trumped by considering what is in the best interest of the nation are not convincing. One can always question whose interests are being served when assertions are made about 'the national interest'. The rhetoric often appears to be laudable, in that it is, *prima facie*, one of wishing to liberate pupils to 'demonstrate their true potential', but,

The State resorts to the narrative of freedom each time it assumes direct control over the training of the "people" under the name of the "nation" in order to point them down the path of "progress",³⁴³

as Jean-François Lyotard acerbically comments.

Whatever the espoused aims of the educational project are claimed to be, though, knowledge always seems to have a major part to play. To return to the first view of the aims of education quoted above, Whitehead offers the further suggestion that 'Education is the acquisition of the art of the utilisation of knowledge'.³⁴⁴ Newman, in common with the Greeks, sees knowledge as a worthwhile end in itself, but even the voices raised in favour of other agendas would scarcely deny its instrumental value. It is hard to imagine a defensible set of educational aims being constructed which did not assign a central role to knowledge.

³⁴¹ David Carr (2010) 'Education, Contestation and Confusions', *British Journal of Educational Studies*, vol. 58, no.1, pp.89-104, p.102.

³⁴² Speech by the then UK Education and Skills Secretary Ruth Kelly, introducing the White Paper *14-19 Education and Skills* in the House of Commons, 23 Feb 2005.

³⁴³ J-F. Lyotard (1979) [tr. Bennington, G. and Massumi, B. (1984)] *The Postmodern Condition: A Report on Knowledge* (Manchester: Manchester University Press) p.32.

³⁴⁴ Whitehead (1962) *op. cit.*, p.6.

Knowledge is something we ought to care about, as educators. It has an extra value, over and above that of mere true belief, which should be prized and looked upon as one of the key aims of the educational project. As one of the three great transcendentals, the pursuit of truth is a key part of a flourishing life. Learners benefit both from the knowledge which results from their epistemically-virtuous activity and from the knowledge-seeking activity itself.

But the word ‘knowledge’ is, of course, open to interpretation. In some cases, a deficient model of education (such as that of the technicians) is partly attributable to an impoverished view of knowledge. So we seek a demanding construal of ‘knowledge’ that makes it a worthy target for our pedagogical efforts. We thus return to a precursor to Sosa’s approach, Nozick’s elaboration of Plato’s tripartite definition of knowledge (true justified belief), as a starting point for developing a reliabilist virtue-theoretic view of education.

Developing Reliabilist Construals of Knowledge in an Educational Context

Here we unpack Nozick’s reliabilist definition of knowledge and use it to cast light on the educational context. This leads to a more nuanced approach to supporting learning: one in which counterfactuals ($\sim p$) are seen to be significant. In deciding whether or not Nozick’s four conditions are met in the particular case, we judge whether or not the learner has a claim to knowledge p by reliabilist lights.

Nozick’s tracking model sets out the following four conditions for knowledge:

1. p
2. $B_s p$
3. $\sim p \square \rightarrow \sim B_s p$
4. $p \square \rightarrow B_s p$

We can add to this list the notion that Sosa derived from (3) and (4) – and that we discussed earlier (p.38) – that of Cartesian ‘safety’:

5. $B_s p \leftarrow \square \rightarrow p$

For s to know that p , then, it must be the case that (1) p is true, (2) s believes that p , (3) were p not to be true, s would not believe it, (4) were p to be true, s would believe it and (5) were s to believe it, it would be true. Since we are now dealing with an educational setting, s can be understood as ‘student’ and p as ‘some piece of propositional knowledge’ – such as that ‘Larissa is north of Fársala’. There is also an implication (due to Sosa) that the knower deserves credit for knowing that p .

A consideration of the five conditions, which together define knowledge, raises a number of questions when applied to education.

1. What range of propositions ought to be regarded as suitable for the learners’ edification?
2. What level of belief is required of the learner? How can it be made manifest?
3. If p is stipulated to be true, why is it necessary to entertain the possibility that it might be false and how ought this be done?
4. By what means ought the learner form the belief ‘that p ’ from the fact that p ?
5. How can the learner ensure that his beliefs are safe – that is, not easily mistaken?

We can deal with the first three under the headings ‘Range of Propositions p ’, ‘Believing That p ’ and ‘Counterfactual Sensitivity’. The last two are considered together as ‘Acquiring Safe Beliefs’. Taking these in turn:

Suitable Range of Propositions for the Learner – Including ‘Threshold Concepts’

The question about what range of propositions the educational project ought to treat can be answered with reference, inter alia, to (a) the perceived needs of the learner (b) national priorities or (c) the subject disciplines. For the first (a), an overarching educational (as opposed to subject-centred or political) reason for including a proposition of a particular type may be that it simply gives the learner practice in

dealing with that type of concept. Or, it may concern a topic that is likely to pique his interest and extend his knowledge in worthwhile ways. For the second (b) we can readily find examples of political attempts to make educational outcomes match national priorities. This happens at all phases of education, including university. The euphemism of alignment is used here instead of compliance to indicate the requirement of higher education institutions to conform to government edicts vis-à-vis their educational outcomes, on pain of funds withdrawal for non-compliance:

To drive the reform and modernisation of the third level sector by enabling institutions to align their strategies with national priorities through the implementation of the new funding arrangements and the impact of major investment under the Strategic Innovation Fund.³⁴⁵

It would be naïve to argue that education ought to be decoupled completely from the economic agenda. However, if narrowly-conceived national priorities are the sole determinant of the range of propositions, *p*, of which we ought to treat, some other candidates – for example, the subject disciplines, the needs of the learner and ‘threshold concepts’ – may be relatively and unvirtuously neglected. For the last, (c), individual propositions can be identified as nodes in a coherent subject-web, the most important of which will include ‘threshold concepts’, a topic that needs further elaboration.

A variety of propositions are considered by educational programmes, but they do not all have the same importance. Some are so trivial that suggesting a connection between their acquisition and what may be considered the educational *telos* of enhancing the learner’s intellectual flourishing would be untenable, while others are claimed to have a special significance. However, some important instances of *p* involve ‘threshold concepts’, which are ‘akin to ... portal[s], opening up ... new and previously inaccessible ways of thinking about something ... without which the learner cannot progress’,³⁴⁶ and hence could well have a major bearing on his epistemic flourishing. Two caveats ought to be made at this point, though, since valuable as the notion of ‘threshold concept’ may be, the coiners of the term (i) intend it to be used to help *university* teachers in their planning and (ii) are working within a rather technicist ‘learning outcomes’ paradigm. However, the idea of a previously blocked route to troublesome knowledge becoming newly-passable is a familiar one in ancient Greek

³⁴⁵ Government of Ireland (2007) *ibid.*, p.189.

³⁴⁶ Jan Meyer & Ray Land (2003) ‘Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines.’ *Occasional Report* no.4. (Edinburgh: ETL Project).

thought – the *aporia* reveals a *euporia*³⁴⁷ – which suggests that, used with caution, the concept might have more general educational import. We shall explore the notion a little further.

Meyer and Land characterise threshold concepts as transformative, irreversible, integrative, bounded and troublesome. After his epiphany, the learner sees things in a new light: one in which disparate and puzzling phenomena now appear lucidly connected. Following his transformation, the knower is changed forever and cannot return to his old ways of thinking: Saul becomes Paul. The idea is an attractive one, but we ought to look at the details to see how this plays out in practice.

Interestingly, many of the examples cited by Meyer and Land relate to absence or negation rather than presence: $\sim p$ rather than p .³⁴⁸ Medical undergraduates, for instance, need to learn to see pain as ‘an ally that aids diagnosis and healing’,³⁴⁹ rather than as an unredeemably negative phenomenon which needs to be removed. Similarly, in physics, the *absence* of order – entropy – is a problematic concept which is nevertheless essential for accessing the key ideas of thermodynamics. For economists, the threshold concept of ‘opportunity cost’ deals with what *Homo economicus* could be doing with his time, but is in fact *not* doing, rather than with the costs and benefits of what he is actually doing. More formally: ‘Opportunity cost is the evaluation placed on the most highly valued of the rejected alternatives or opportunities’.³⁵⁰ For the economics student, coming to know that evaluations of actual and counterfactual choices (including the choice of not choosing) can be made – and that plumping for X means eschewing Y and Z – involves crossing an intellectual threshold. In doing it he acquires the notion of ‘opportunity cost’ and has access to economic thought of a more abstract and generalisable nature than he had before.

³⁴⁷ Meyer & Land make no mention of the Greek provenance of their idea.

³⁴⁸ Meyer & Land do not talk in these terms, nor do they seem to have noticed this common feature of many of their examples.

³⁴⁹ Jan H.F. Meyer & Ray Land (2005) ‘Threshold concepts and troublesome knowledge (2) Epistemological considerations and a conceptual framework for teaching and learning’, *Higher Education*, 49: pp.373-388, p.374.

³⁵⁰ Eatwell (1998) in Meyer & Land (2003) op. cit. p.3.

In mathematics, Meyer and Land identify the term ‘limit’ as a threshold concept, as in the following.³⁵¹

In the limit, as $\theta \rightarrow 0$, $F(\theta) = (\sin \theta)/\theta = 1$

(θ [the angle between the base and the hypotenuse] in radians)

Again, we see that what is important here is not what exists (a right angled triangle with θ having a non-zero value such that $\theta < \pi/2$ radians) but what cannot exist (a right angled triangle in which θ is zero). The triangle which represents the limit is not only counterfactive, it is also impossible. If θ is zero, there is no triangle but only a single straight line. Moreover, attempting to calculate $(\sin \theta)/\theta$ involves the mathematical felony of dividing by zero. The student of mathematics ought eventually to appreciate that as θ approaches zero, the fraction $(\sin \theta)/\theta$ approaches 1. The significant word here is ‘approaches’, for were θ , *per impossibile*, to arrive at zero, the triangle would disappear, making nonsense of the idea of measuring its sine. Being able to accept such impossible pairs as (i) p [that if θ were zero, then $(\sin \theta)/\theta$ would be 1] and (ii) $\sim p$ [that if θ were zero, then $(\sin \theta)/\theta$ would not be 1]³⁵² liberates the tyro mathematician from the everyday notion of a limit as something that can be reached. Furthermore, having crossed this *conceptual* threshold, the differential calculus – which essentially deals with rates of change $[dy/dx]$ in the limit, as x approaches zero – is now more genuinely available to him.

From an educational viewpoint built on epistemic virtue, what is particularly interesting in the last example is the question of epistemic authenticity. The student who has not passed the intellectual threshold and acquired the mathematical notion ‘limit’ (which cannot itself be transgressed) may still manage to demonstrate an ersatz mathematical proficiency, one that simulates the genuine work of his classmate, who *has* stepped through the conceptual portal and now has what we might term ‘echt-proficiency’. The aporetic student has perhaps learned the appropriate algorithms in the form of what David Perkins calls ‘ritual knowledge’. He has become habituated to mathematical rituals of ‘a routine and rather meaningless character’; he knows ‘the routine that we

³⁵¹ I have written this expression slightly differently from the version in Meyer & Land, for clarity and completeness. They omitted the important condition that θ must be expressed in radians.

³⁵² ‘ $(\sin \theta / \theta) = 1$ ’ would not be true, since it trades on meaningless expressions.

execute to get a particular result'.³⁵³ To the positivistically-inclined assessor, both students deserve the same credit, but from a virtue perspective one is less epistemically-praiseworthy than the other, for his correct answer comes from an uncomprehending and shallow *mimēsis* rather than from intellectual virtue.

Another example from Meyer and Land's paper is the threshold concept of 'signification' in the field of cultural studies. Again, $\sim p$ makes an appearance, if we gloss p as 'that *this* is being said':

... techniques of *deconstruction* for analyzing literary texts (with a strong emphasis on the ironic, the contradictory, the ludic) often appear counter-intuitive, looking for *absences*, or what is not there, in order to gain insights into how the text is currently structured by a prevailing set of (occluded or tacit) values or priorities.³⁵⁴

In other words, it is not the readily-apparent conclusion p (that *this* is being said in the text) on which the reader ought to reflect, but $\sim p$ (it is not the case that *this* is being said in the text). '*This*' is the explicit message of a text, but it is the unsaid, the hidden and silent assumptions that are of greater interest.

A final instance concurs with my own experience of teaching Newtonian mechanics³⁵⁵, and, for learners, falls into Perkins' category of 'foreign' knowledge which 'comes from a perspective that conflicts with our own'.³⁵⁶ Pupils often spontaneously adopt explanations for the motion of bodies, which are at odds with classical physics and of a distinctly Aristotelian type: for example, that a rocket needs to burn continuously to sustain its movement in travelling to a distant planet. These misconceptions are eminently reasonable, though, for everyday experience seems to contradict the Newtonian law that 'in the *absence* of a force', an object will either remain at rest or 'continue to move in a straight line at constant velocity'.³⁵⁷ Objects *do* seem to need a

³⁵³ David Perkins (1999) 'The many faces of constructivism', *Educational Leadership*, 57 (3), p.8. Meyer & Land (2003) quote Perkins (1999) too, but they give incorrect page numbers and change Perkins' 'foreign knowledge' into 'alien knowledge'. The latter change is arguably for the better, since Perkins gives a history-teaching example of what he means by this: 'presentism', in which pupils '... view past events through present knowledge and values'. (Perkins, *ibid*, p.10). A period of remote history may be 'alien' to us, but being 'foreign' has a different connotation.

³⁵⁴ Meyer & Land (2003) *op. cit.*, p.3. [Italicized words in original].

³⁵⁵ This is not just anecdotal evidence, however. For further evidence of such misconceptions, see Kevin M. Leander and David E. Brown (1999) "'You Understand, But You Don't Believe It": Tracing the Stabilities and Instabilities of Interaction in a Physics Classroom Through a Multidimensional Framework', *Cognition and Instruction*, vol.17, no.1, pp.93-135. p.95.

³⁵⁶ Perkins (1999) *op. cit.*, p.10.

³⁵⁷ Isaac Newton (1687) *Philosophiæ Naturalis Principia Mathematica*, Law I. [This is a merely a special case of Law II [$F = ma$] in which $F = 0$, but it usefully underlines Newton's rejection of the Aristotelian treatment of forces and motion].

motive force to keep them moving, although within Newtonian mechanics this is explained by the necessity of overcoming the opposing force of friction. Here we leave Meyer and Land's notion of threshold concepts and consider briefly how the faulty propositions held by the learners in this final example can be ousted.

In setting out to displace these 'alternative frameworks' (such as pupils' Aristotelian ideas about motion), it is important to bear in mind that their mistaken adoption by learners is neither arbitrary nor intellectually vicious but is based quite reasonably on a priori categories and sensory experience: a tethering that makes them particularly tenacious. This tenacity is strengthened by the fact that the elegant mathematical constructions of classical physics are not easily vulnerable to attack or engagement by pupils in school science laboratories. There is something abstract and Platonic about Newton's work that insulates it from empirical falsification in the classroom. Only on the quantum scale, or at speeds approaching that of light, does the Newtonian world-view break down, so any apparent classroom departures from Newton's laws are usually (and correctly) explained away with reference to friction or experimental error. Thus, our experiments with 'friction-compensated' ramps, trolleys and timers are designed not to put Newton to the empirical test but to make sure that we confirm his laws in the eyes of our pupils.

This dependence on authority (Newton's authoritative position in the scientific pantheon; our dual role as both authority-figure and *an authority* in our subject) is not likely to engage learners in responsible, intellectually-virtuous dialogue. It will, rather, encourage unresponsive acceptance of a pre-defined version of reality. Teachers might seek to reassure their pupils that if they just take it on trust for the time being, it will all make sense eventually. Unfortunately, an unwillingness to accept the deferred gratification required, and revulsion at the often forbidding nature of the scientific corpus, has led many to seek alternative explanations for fundamental questions not in the scientific domain, but in pseudoscience. To avoid this epistemically-unfortunate, but understandable, abdication on the part of pupils, we need to be honest about the conflicts that abound and concede the apparent attractiveness and plausibility of a range of counterfactive propositions $\sim p$, instead of merely dismissing them and substituting p by teacherly edict. This search for genuine knowledge rather than second-hand opinions requires authentic dialogue. In *Republic* 435a, Plato offers the image of the two fire-sticks which cannot individually make fire but require contact to produce the

necessary spark. It is the intersubjective nature of this construction³⁵⁸ of knowledge that gives this approach its power. To flourish epistemically requires intellectually-virtuous informed dialogue and guided experience. However, the teacher would be unwise to emulate the rigorous insistence on definitions and steamrolling reductio moves frequently found in Plato's dialogues. The root meaning of 'elenchus' relates to shame, we recall, which is not usually a desirable emotion in classroom contexts.

So, a consideration of Nozick (1) has led us to consider the range of propositions which are proper for the education project. Some of these – such as the threshold concepts – appear to be particularly important for the intellectual flourishing³⁵⁹ of learners and may justifiably be promoted on that ground. However, the construction of a 'shopping list' of propositions, p , (for example in an examination syllabus) might cause teachers to approach them in too direct a manner and inadvisedly brush off the counterfactual propositions, $\sim p$, held by learners. These misconceptions need to be addressed to clear the way for a 'pro-factual' concept acquisition of p , and dialogue is a good candidate for a way of dealing with them virtuously.

Believing That p versus Being Able to State "That p "

Asserting as a condition for knowledge that ' s believes that p ' is not, I suggest, to be conflated with the requirement that ' s is able to state that p '. In Dickens' *Hard Times*, for example, Sissy Jupe's deep, first-hand knowledge of horses is over-ridden by Gradgrind's demand for propositional evidence that she really does know what a horse is – a demand allegedly not met by her, but (by positivist lights) adequately demonstrated by another pupil: 'Bitzer,' said Thomas Gradgrind. 'Your definition of a horse.'

'Quadruped. Graminivorous. Forty teeth, namely twenty-four grinders, four eye-teeth, and twelve incisive. Sheds coat in the spring; in marshy countries, sheds hoofs, too. Hoofs hard, but requiring to be shod with iron. Age known by marks in mouth.'
Thus (and much more) Bitzer.

'Now girl number twenty,' [Sissy Jupe] said Mr. Gradgrind.
'You know what a horse is.'

³⁵⁸ Socrates is of course no radical constructivist, but he believes that The Truth can best be sought by dialogue. In this respect, he is what we might term a 'pedagogical constructivist'.

³⁵⁹ Flourishing is of course an Aristotelian rather than a reliabilist notion. A reliabilist justification for including the threshold concepts in a syllabus would be that they open up access to a wider range of true beliefs and hence 'help maximise one's surplus of truth over error', to use Sosa's phrase. Ernest Sosa (1985) 'Knowledge and Intellectual Virtue', *Monist*, 68, no.2, p.227.

The significance of this vignette is that Sissy Jupe, by virtue of her experience, is in a better position than any of the other protagonists to *know* what a horse is, but her voice is silenced in favour of the ‘facts’ of the propositional description offered by Bitzer.³⁶⁰ We can locate her in Michael Polanyi’s ‘... area where the tacit predominates to the extent that articulation is virtually impossible; we may call this the *ineffable domain*’.³⁶¹ Were Gradgrind a more virtuous teacher, he would act in a maieutic role here, by helping her to deliver her knowledge in a form suitable for respectful public discussion. He would enable her to make the tacit more explicit. Sissy has a good web of beliefs about horses: representing sound cognitive contact with reality, and woven during long first-hand experience, helped by intersubjective triangulation with the interpretations of her father and others. But Gradgrind has isolated her and treated her like a feral knower. Bitzer, however, is a horse of a different feather, who might be considered to occupy ‘... the area in which the tacit and formal fall apart, since the speaker does not know, or quite know, what he is talking about’.³⁶² In typical educational contexts, having no real feel for what one is talking or writing about is not a barrier to obtaining reward, for often what counts is that ‘knowledge’ be explicitly demonstrated. The ‘diffident schoolboy’³⁶³ can state ‘that *p*’ in an exam, yet not be entitled to claim it as knowledge, since he does not believe the proposition, beyond having a faint intuition that it is more likely than not that *p* might be the right answer to the question. Although this is not a creditworthy, qua virtuous, response, it usually *will* earn him credit in the form of academic reward. I return to this problem later (p.207).

In educational contexts, then, authentic belief and espoused belief can come apart in a manner that may deny the learner knowledge on the criterion of Nozick (2), but not on

³⁶⁰ We can regard her more favourably as a knower, however, when we consider her ‘being-in-the world’, à la Maurice Merleau-Ponty’s *La structure du comportement* (1942). Merleau-Ponty stresses ‘the primacy of the lived over the conceptual. ... [A]lready emphasized by Husserl and Heidegger, is the emphasis on the concrete, the felt, the lived, the here-and-how available to you and me. But of course if one is to stay true to the lived and yet have concepts, then there must be a way in which concepts can be related to (without replacing) the concretely lived.’ Eugene T. Gendlin (1964). ‘Review of Merleau-Ponty’s The structure of behavior’, *The Modern Schoolman*, 42, pp.87-96, p.88 [Online] available at http://www.focusing.org/gendlin/docs/gol_2091.html [Accessed 15 April 2011].

³⁶¹ Michael Polanyi (1958/1962) *Personal Knowledge: Towards a Post-Critical Philosophy* (London: Routledge & Kegan Paul), p.87 [Emphasis in original].

³⁶² *ibid.*, p.87.

³⁶³ Although the idea of the diffident schoolboy not really knowing what he half-heartedly plumps for in an exam is not a new one, the earliest reference I can find is Jonathan Dancy (1985) *Introduction to Contemporary Epistemology* (Oxford: Blackwell) p.40.

positivist tests for knowledge. The converse can also be the case, as we saw with Sissy Jupe.

Sensitivity Towards Counterfactive Possibilities

Nozick proposes the counterfactual conditional $[\sim p \square \rightarrow \sim B_s p]$ to be indispensable for knowing that p , which prompts the question: If p is deemed to be true, then why is it necessary to entertain the possibility that it might be false? This, rather counter-intuitively, turns out to be an essential aspect of virtuous knowledge-acquisition.

A modest fallibilism requires the learner to hold back from full assent to true belief p , and to be alive to the possibility that $\sim p$ is in fact the case. This is analogous to Popper's 'supreme rule' (similar in scope to Kant's categorical imperative, but in the domain of enquiry rather than ethics) which stipulates that all rules regulating empirical method, 'must be designed in such a way that they do not protect any statement in science from falsification'.³⁶⁴ As we saw a moment ago, the rules of engagement of classroom science *do* protect authoritative statements, such as those of Newtonian science, from falsification. In principle, all propositions offered and entertained in the classroom should have notional small-print 'terms and conditions' attached, indicating that their value may go up or down in the light of new evidence or analysis. In practice, though, many propositions are simply taken on trust, because considering the alternatives would be too time-consuming. This may be an argument for restricting the number and range of propositions encountered during schooling, for being parsimonious with content would allow a more virtuous approach to be taken to its acquisition, leading to a relatively greater uptake of full-blown knowledge rather than mere true belief. Taking this to extremes would be unvirtuous, however: without accepting some propositions p (while ignoring $\sim p$), the project of constructing a web of beliefs could not even begin. Furthermore, as we saw in chapter 2, testimony is a legitimate source of knowledge, alongside perception, memory and reasoning. Nevertheless, at some judiciously-chosen points in the process, the possibility of propositions $\sim p$ ought to be entertained, together with a consideration of what evidence would support them, and what implications would follow from their being the case. The question needs to be asked: How do we know that $\sim p$ is false? And what is it

³⁶⁴ Karl Popper (1959) *The Logic of Scientific Discovery* (New York: Basic Books) p.54.

about p that convinces us of its safety as a belief? Answering these questions provides the learner with a second-order perspective on his first-order knowing.

Acquiring Safe Beliefs

According to virtue epistemology, the processes by which the learner forms the belief ‘that p ’ from the fact that p ought to be virtuous ones. Linda Zagzebski proposes a rich neo-Aristotelian construal of what this might mean, to which I later attend for educational purposes (p.196), but for the moment I shall continue to critique and develop a reliabilist version, using some further analysis of subjunctive conditionals. The next few pages are hence rather technical in nature, but a full exploration of belief formation vis-à-vis conditionals, followed by a consideration of belief formation as artificial intelligence theory sees it, has significant pay-offs for a reliabilist virtue epistemology of education. One of these outcomes is that the sceptic is sidelined from the educational realm. This part of the thesis also justifies our educational appropriation of Nozick’s four reliabilist conditions for attributing knowledge to the student, in preference to Sosa’s Cartesian ‘safety’ tracking.

Subjunctive Conditionals and Belief Formation

Our student s ’s believing that p means that he holds the view that p is the case. For this to be knowledge, though, Nozick’s tracking condition (3) [were p not to be the case, then s would not believe it] and condition (4) [were p to be the case, then s would believe it, even if circumstances changed] must also obtain. Furthermore, in some of his writings Sosa requires a belief to be ‘safe’ to constitute knowledge, and to him a belief is safe iff $(B_s p \square \rightarrow p)$ ³⁶⁵: in other words, a belief is safe just in case were s to believe it, then it would be true. My contention is that Nozick’s original set of four conditions is suitable for analysing the development of knowledge in the student, while Sosa’s safety [Nozick (5)] is better reserved for describing the reliability of the teacher’s knowledge in her field of expertise.

³⁶⁵ Sosa (1999) ‘How to defeat opposition to Moore’, *Philosophical Perspectives*, 13, Epistemology, p.146.

Let us begin by considering the teacher t 's beliefs in her specialist field, F . If t is reliable in F , then her beliefs are safe: if she believes that p (where p is a non-peripheral part of F) then p is in fact the case.

$p \in F$

$\forall p: B_t p \square \rightarrow p$

This captures the idea that a knowledgeable teacher is a reliable epistemic source. The propositions in which she believes, in her area of specialisation,³⁶⁶ are (largely) true. Furthermore, if she asserts (A) any propositions from her field, these will be true, so learners can thus rely on her testimony.

$p \in F$

$\forall p: A_t p \square \rightarrow p$

However, while Sosa's notion of safety is a useful one for describing the nature of stable beliefs (such as a teacher might hold) it is not as helpful in analysing the learner's *developing* knowledge.³⁶⁷ When considering learning, we are interested in the genesis and maintenance of beliefs and not just in their safety. In this respect, Sosa's definition of 'safety' gives an unfortunate impression about the direction of causation. Were we to apply it to the learner, we would seem to be implying a causal link between his beliefs and some aspect of the world, in which the cause is his belief, and the effect is p becoming the case.³⁶⁸ It looks like s 's act of believing p makes it true, by fiat, as it were. This was not Sosa's intention, but we need to look elsewhere for arguments to quash this interpretation. William Harper offers a rival version to the 'Ramsey Test' (the latter being suitable only for analysing indicative conditionals, not subjunctive conditionals such as Sosa's safety).³⁶⁹

³⁶⁶ In the case of Primary school teachers, they need to master a number of fields to a suitable level.

³⁶⁷ I argue elsewhere that the teacher ought also to be a learner, but here we are considering the two separately and restricting our discussion to well-established knowledge in a field in which the teacher is already well-grounded.

³⁶⁸ David Chalmers & Alan Hájek arrive at a similar conclusion using a slightly different form of the conditional: 'Consider also an indicative conditional of the form (2) If I believe p , then p And if one accepts all instances of (2), one should accept that one is infallible. So Ramseyan ... principles entail that rational subjects should accept that they have the epistemic powers of a god'. David Chalmers and Alan Hájek, A. (2007), 'Ramsey + Moore = God.' *Analysis*, 67: pp.170-172, p.172. Sosa's version though is a subjunctive conditional, rather than an indicative conditional, so Ramsey's test does not apply in that case.

³⁶⁹ I have had reluctantly to change the author's text slightly in this case. Original letters P and Q have been changed to D and E, since the originals might cause confusion in the context of my use of p .

On this rival account

$$D \Box \rightarrow E$$

Would be acceptable just in case one accepted either of:

(a') D would bring about E

or

(b') E , and D would not change this

Harper's condition (a') conforms to the undesired interpretation of 'safety', in which the agent would 'bring about' the truth in a godlike fashion by merely believing it to be the case. Condition (b') denies that the agent's believing affects the truth – thereby getting Sosa off the hook – but in doing so it removes causation from the expression completely. So if we want to attend to the causal train that enables students to acquire knowledge – in other words, the learning processes – we are better off staying with Nozick's tracking rather than with Sosa.

Returning to Nozick's four conditions, then, we can say that s knows p if and only if:

1. p ✓
2. $B_s p$ ✓
3. $\sim p \Box \rightarrow \sim B_s p$ ✓
4. $p \Box \rightarrow B_s p$ ✓

If we can notionally tick all four conditions, then our putatively knowing student indeed has knowledge. Deciding whether or not the first two are assertible is conceptually (if not operationally) straightforward: (1) is p true? and (2) does s believe 'that p '? The third condition is not so simple to decide upon, however, for it treats of counterfactuals: statements which are true in some other possible worlds. How then can the statement be assessed for truth in this world? How can it be evaluated as 'tick-worthy'?

Here again, we use the Harper test. Applying it to Nozick (3) $\sim p \Box \rightarrow \sim B_s p$, we see that either [(a') $\sim p$ would bring about $\sim B_s p$] OR [(b') $\sim B_s p$, and $\sim p$ would not change

William L. Harper, Robert Stalnaker, Glenn Pearce (1981) *IFs: conditionals, belief, decision, chance and time* (Dordrecht: D. Reidel Publishing Co.), pp.18 & 19.

this]. Clearly, this time we ought to reject (b'), for implausibly claiming as a condition for knowledge that s would have a belief with no causal link to $\sim p$, and was thus a fixed and incorrigible prejudice. So we are left with the causative claim of (a'). In other words, the *method* that s uses to determine that p must be counterfactually sensitive: it tracks the truth, such that if p were false he would notice.

Nozick's fourth condition [$p \square \rightarrow B_s p$] requires that s would carry on believing p in a close possible world in which p still remains the case. Applying the Harper test to this condition, we find that this means either that (a') p brings about s 's belief OR that it is a prejudice with no link to the truth, but it happens by luck to be true. Here again, we favour the causative interpretation, on the grounds that a fortunately-true belief with no causal provenance is not to be classed as knowledge

My contention, then, is that in the educational context we can employ Nozick's four tracking conditions to the student in order to decide whether or not he has non-accidental knowledge, and use Sosa's 'safety' to describe the teacher's knowledge. In the case of Nozick, we follow the causal version of the two possible Harper interpretations of the conditionals, and in the case of Sosa's safety we take the other, non-causal version, in order to avoid a claim of infallibility. To make this clearer, I offer an example set in a school sixth-form science lesson, constructed to put Nozick's criteria to the test.³⁷⁰

A physics teacher announces that (p) a new particle has been discovered during an experiment in the Large Hadron Collider at CERN. At break time, one of the sixth-form students, Simon goes out for a smoke, while another student tells the rest of the class that she (the teacher) is mistaken because he had seen on the evening news that the LHC was being shut down for a week for repairs. In fact, only the teacher had seen a morning news bulletin which had reported that the problem had been fixed and the new particle discovered.

³⁷⁰ My model uses a famous example from the epistemological literature as a template. In Gilbert Harman's 1973 story – designed to undermine Nozick (4) – a dictator is assassinated. The first editions of a newspaper report the incident, but the regime suppresses the news and forces later editions to publish a (false) retraction. Harman wants us to consider whether or not s (who read only the earlier reports) knows that p (that the dictator is dead). Since s only missed the later editions by chance, and in close possible worlds he might have seen them, Harman concludes that s did not have knowledge and so Nozick (4) is a faulty condition for knowledge. Sherrylin Roush (2005) *Tracking Truth: Knowledge, Evidence and Science* (Oxford: Oxford University Press) p.94

If we now ask the question, “Does Simon know that p ?” we may feel that the answer is “Yes. He has used a reliable method to acquire the belief that p exists.” This passes the first three of Nozick’s conditions.

1. It is the case that p .
2. Simon believes that p .
3. Had p not been the case, his teacher would not have told the class that it was, so Simon would not have believed it.

But it fails on the fourth:

4. Had p been the case, but the other circumstances were to be slightly different (i.e. he hadn’t gone for a smoke), s would not have believed p .

So Nozick (4) seems not to be a suitable criterion for knowledge, since it would deny Simon knowledge of p at that moment. However, if we take a diachronic rather than synchronic view of Simon’s predicament, a rather different picture emerges. After the break, a discussion between the proponents of p (Simon and his teacher) and those of $\sim p$ (the non-smoking students) would allow everyone to form the belief that p . Not only that, but a productive dialogue about the genesis of the knowledge could provide the participants with an enhanced epistemic perspective which would elevate it to the category of Sosa’s ‘reflective knowledge’: that is, ‘apt belief aptly noted’.³⁷¹ The aptness (i.e., accuracy because adroit) of the teacher’s new knowledge in this case would be higher than that of the students, because she had a fuller and more coherent conceptual framework against which to test the plausibility of p , and, furthermore, she had interpreted and presented the experiment in ways accessible to her students. This extra level of engagement with p would have increased its epistemic standing in her own doxastic web, C .

Nozick (5) (Sosa’s ‘safety’) works well for the teacher, however. She believes that p because she understands the physics theory underlying the experiment, she has seen the scenes of jubilation at CERN and she has heard the announcement from the team-leader that the particle’s existence has been confirmed. This is thus a safe belief (i.e., it

³⁷¹ Ernest Sosa (2007) *A Virtue Epistemology. Apt Belief and Reflective Knowledge*, vol.I (Oxford: Oxford University Press) p.32.

would not easily turn out to be false). It has passed Nozick (4) at the acquisition stage, but it has also met the safety requirement by being solidly accommodated into a stable set of related pre-existing true beliefs. She knows by long-term induction that this type of testimony reported by this particular news channel is generally sincere and competent. The announcement also coheres with her well-established conceptual framework in particle physics. It is not an infallible belief, for science is always provisional: but it is nonetheless one upon which she can rely *pro tanto*.

Reliabilism is concerned with the non-accidental acquisition of true single propositions p . To count as knowledge in Sosa's model, the epistemic act of hitting these individual targets must be accurate, adroit and apt – perhaps too high a bar in practice. As educators, however, we are interested in the webs of beliefs of learners, and the genesis of these, and not just their atomic constituents, so a further elaboration of the reliabilist model is needed. To develop this in a principled way we draw on a theory that has a similar level of generality to reliabilism simpliciter, and that considers the effects of new epistemic input on an existing corpus of beliefs – a tenet from the field of artificial intelligence (AI). This enables an elegant handling of three features that have been prominent in our discussions so far: proposition p , counterfactive proposition $\sim p$ and the learner's existing corpus of beliefs, C (or doxastic web).

Artificial Intelligence Theory: Revising the Doxastic Web

Virtue epistemology has much to say about the role of the agent's virtues (variously construed) in acquiring true beliefs. It is relatively silent, however, on the mechanics of belief modification. In order to extend reliabilist virtue epistemology, we turn to AI theory to provide some insights at the high level of generality we seek. I should make it clear here that in drawing upon this work, I am not attempting to conceptualise the mind as a sort of machine and thereby deferring to technicism and scientism. Nor is this a simple *reductio* move. The function of this fragment of AI theory in this thesis is to develop reliabilism in a coherent way, and to show that certain aspects of village technicism in education are deeply flawed, even on its own terms.

Belief Revision, Contraction and Expansion

As we saw earlier (p.149), a major aim of education is for the learner to acquire knowledge. Since students always have some pre-existing beliefs, learning typically involves revising their general belief corpora, C , to incorporate new knowledge: say, ‘that p ’. Because of the web-like nature of individual belief-systems, however, the addition of a new proposition, p , to C may well have effects on nodes other than the one representing the new belief. The overall scheme is as follows³⁷²:

$$C_0 * \text{Epistemic Input} = C_1$$

This is a dynamic model of belief *change*, in contrast to static descriptions of preformed belief. Understanding virtuous belief revision ought to be a natural concern of virtue epistemology and of education. Understanding the logical details of how this works is also a major preoccupation of artificial intelligence (AI) theory, a branch which owes much to the seminal work of Carlos Alchourrón, Peter Gärdenfors, and David Makinson (AGM).³⁷³ The links become clearer when we consider Gärdenfors’ definition of ‘epistemic inputs’ as ‘the deliverances of experience or as linguistic (or other symbolic) information provided by other individuals (or machines)’.³⁷⁴ In virtue-epistemic terms, ‘experience’ relates to our earlier discussion of the ‘on-board’ source of perception,³⁷⁵ and ‘linguistic ... information provided by other individuals ...’ is simply testimony. So, there is much congruence between the two fields, in that AI’s ‘epistemic input’ can be considered as equivalent to virtue epistemology’s ‘experience and testimony’. The reference to machines is an indication that the ‘deliverances’ of the virtual world now have to be taken seriously in any comprehensive theory of belief change (an avenue I explore later [p.264]). The denizens of cyberspace are a source of extended testimony.

³⁷² Here I intend C_0 to be the original belief-set and C_1 to be the revised belief-set which the learner possesses after a learning event. The symbol ‘ K ’ is commonly used in this field to signify a belief-set, but, mindful of the possibility of confusion, given my usage of K to mean ‘knows’, I instead use C (for ‘Corpus of background “knowledge”’). The asterisk, *, stands for the process of belief revision.

³⁷³ C. Alchourrón, P. Gärdenfors and D. Makinson (1985) ‘On the logic of theory change: Partial meet contradiction and revision functions’, *The Journal of Symbolic Logic*, 50, pp.510-531.

³⁷⁴ P. Gärdenfors (1988) *Knowledge in Flux* (Cambridge, MA, USA: MIT Press), p.7, quoted in John L. Pollock and Anthony S. Gillies (2000) ‘Belief Revision and Epistemology’, *Synthese*, vol.122, no.1/2, p.70.

³⁷⁵ I appreciate that conflating experience with perception in this way does not do justice to the notion of ‘experience’, which is a rich combination of perception and interpretation. A connoisseur of opera, for example, would hear things unavailable to the newcomer, even though the sonic and visual perceptions may have been very similar. Nevertheless, for the sake of simplicity and generality, this elision is allowed.

In the ‘AGM’ framework, three belief change operations are defined (see *Table 1*)

Operation	Explanation
+ : Belief expansion	The epistemic input is such that it can simply be added to C_0 , with no need to remove or modify any existing beliefs
- : Belief contraction	The epistemic input causes the removal of one or more existing beliefs from C_0 .
* : Belief revision	The epistemic input is incorporated into C_0 , but consistency requires the removal of some existing beliefs.

Table 1 – Belief Change Operations in AGM Theory

In other words, belief expansion adds to our corpus of beliefs, belief contraction removes previously-held beliefs, and belief revision is a combined operation of expansion and contraction.

It is important to note here that we can consider a *reduction* in the number of our beliefs to be – paradoxically – an instance of learning. Curriculum planners do not usually state that students will know less at the end of a course than they did at the beginning, but this would be a legitimate aspiration (as long as the equivocation over the word ‘know’ is recognised: the students would only believe less, not know less). By reducing the number of false beliefs in their corpus, C , students would have enhanced their cognitive contact with reality and hence would have learnt. Jettisoning untruths is a type of learning.

However, it is debatable whether in practice a proposition p can just be discarded from C without putting something in its place. Granted, p may simply fade from C without any rebutting epistemic input: we can simply forget that Lagos is the capital of Nigeria. But belief-contraction is stipulated to require epistemic input, so memory-loss does not constitute contraction under the AGM rules. Furthermore, in educational terms, there is nothing creditworthy about increasing one’s proportion of true beliefs by forgetting a false belief. Lagos is not in fact the capital of Nigeria, but this commonly-held false

belief needs to be discarded as a result of some epistemic input, and not simply by mental atrophy, if its removal is to count as contraction. In my case, I accepted the testimony of a Nigerian taxi driver in Dublin that Abuja is now the capital of his homeland, and my subsequent on-line research revealed that the change occurred some thirty years ago. Here was an example of Gärdenfors' 'epistemic inputs' being 'the deliverances of ... linguistic ... information provided by other individuals (or machines)'.³⁷⁶ However, this was not a case of belief-contraction simpliciter, for my jettisoned false belief that 'Lagos is the capital of Nigeria' was replaced by the true, virtuously-acquired belief that 'Abuja is the capital of Nigeria', or, should I forget this, that 'Lagos is no longer the capital of Nigeria'. This last proposition is of a form which I suggest is a commonplace way of replacing a false belief p : we simply replace it with $\sim p$.³⁷⁷ So, a child will fill the vacuum left by p (Santa exists) with its negation $\sim p$ (It is not case that Santa exists). A further point to make is that not all epistemic input will lead to a change in one's corpus of beliefs. It may be that the deliverances of the epistemic input are entertained only long enough to mount a rebuttal, and that one's cherished beliefs are left unharmed by the recalcitrant experience. According to Quine³⁷⁸ we can always make modifications to our webs to save particular beliefs. Whether or not such a defence is virtuous is an issue to which I shall return.

Let us now consider belief-expansion and examine how this combines with belief-contraction to produce a belief-revision that is consistent with other entrenched beliefs. Following the conventions introduced earlier, let the epistemic input be such that it can be encoded in proposition p . If the existing belief-corpus is C_0 , then the result of revising this, by the incorporation of p , is a modified belief-set, C_1 , such that:

$$C_1 = C_0 * p$$

The principle of minimum mutilation (a term I have imported from Quine,³⁷⁹ rather than from Gärdenfors) means that C_1 is in all respects the same as C_0 , save those minimal modifications which have to be made in order to accommodate p . If these

³⁷⁶ Peter Gärdenfors (1988) *Knowledge in Flux* (Cambridge, MA, USA: MIT Press), p.7, quoted in Pollock and Gillies (2000) op. cit., p.70.

³⁷⁷ Here, I use p to represent a false belief and $\sim p$ for a true one: the reverse of the convention employed in the rest of this thesis.

³⁷⁸ W.V.O. Quine (1961) 'Two Dogmas of Empiricism' section 6 in *From a Logical Point of View*, reprinted in Louis P. Pojman (ed.) (2001) *Classics of Philosophy: the Twentieth Century* (Oxford: Oxford University Press).

³⁷⁹ From Quine (1961) op. cit., p.212.

modifications are restricted to p (in other words, if no changes need be made to the remainder of the original belief-base, because p is logically consistent with the rest of C_0), then the belief-revision process is one of straightforward belief expansion:

$$C_1 = (C_0 * p) = (C_0 \oplus p)$$

(Where ‘ \oplus ’ is the expansion operator, as defined above).

An example of belief-revision qua expansion is the following educational scenario. A pupil knows that crows are birds and can fly. He knows that magpies are birds and can fly. He receives epistemic input (via some combination of testimony and perception) such that he comes to know that pheasants are birds and can fly. Here, there is no clash with prior knowledge, no cognitive dissonance, and hence no difficulty in simply revising his existing belief set by expansion.

We earlier typified belief-contraction, or ‘the derogation of p from C ’³⁸⁰ (as Alchourrón, Gärdenfors and Makinson put it, using legal terminology), by the epistemic input that Santa Claus does not exist (p.168). This causes the believer to remove from his stock of beliefs the proposition that there is a Santa. Here, though, it is not enough simply to subtract the now-discredited belief p , ‘that Santa exists’ (and replace it with its negation $\sim p$), for the concept was formerly enwebbed with other elements of C_0 , which too may be affected. Removal of p may, for example, also damage the nodes which encode the propositions that assertions from adults are to be trusted and that good behaviour is always rewarded. It could even lead to the additional positive belief that myths are sometimes used as methods of social control (as in Plato’s ‘noble lie’, for the claimed benefit of the state).³⁸¹ Some workers in this field, however, make the stronger statement that ‘belief sets are closed under logical entailment’.³⁸² In essence, this means that if we know that p , and p implies q , then we also know that q .

³⁸⁰ Alchourrón, Gärdenfors and Makinson [AGM] (1985) op. cit., p.510. They write ‘the derogation of x from A ’, but I have changed the letters to match my earlier convention and avoid possible confusion.

³⁸¹ Plato, *Republic*, III, 389b.

³⁸² Pollock and Gillies (2000) op. cit., p.71.

Closure of Belief Sets Under Logical Entailment

This claim, however, seems implausible and generates a requirement to consider far-fetched sceptical hypotheses [h], such as the possibility that Descartes' *genium malignum* is introducing falsehoods into our minds without our knowledge. 'Knowing that p ' has the logical implication that we know that skeptical hypothesis h is not the case (ie the *genium malignum* is not deceiving us about p):

$$K_s p \rightarrow K_s [\sim h]$$

Since we do not know for sure that h is not the case, then neither do we have knowledge of p .

$$\begin{array}{l} K_s p \rightarrow K_s [\sim h] \\ \sim K_s [\sim h] \\ \dots\dots\dots \\ \sim K_s p \end{array}$$

As well as being a disaster for knowledge-claims in general, the demands of closure lead to particular problems for Nozick's 'sensitivity' requirement, by which we set such great store earlier. Nozick (3), we recall, requires that were p not to be the case, we would not believe it. But under the influence of the *genium malignum*, we might believe it anyway, by being in a state insensitive to the contrafacticity of p . The sensitivity requirement stipulates that in an alternative world in which $\sim p$ obtains, we would believe that $\sim p$. But if this world is one in which Descartes' demon has free reign, we might (wrongly) believe that p , being subject to his undetectable deceptions. Sosa claims that the failure of 'sensitivity' to allow closure of knowledge under implication is a reason to support his rival notion of 'safety', but Jonathan Kvanvig has shown convincingly that 'safety' too suffers from this shortcoming.³⁸³

³⁸³ Jonathan Kvanvig concludes that 'safety theorists have no more right to claims about closure than to sensitivity theorists. The difference is that defenders of sensitivity have admitted failure of closure and safety theorists such as Sosa deny that their view has this implication.' He reaches this judgement after describing a scenario involving randomly-allocated fake barns and real green-painted real barns. 'Bill' can safely say that what he sees is a green barn, but he cannot safely say that it is a barn. Thus 'safety does not preserve closure'. Jonathan Kvanvig (2004) 'Nozickian Epistemology and the Value of Knowledge', *Philosophical Issues*, 14, Epistemology, p.209.

There are two ways of dealing with this problem: we can ignore the sceptical challenge or we can deny that the lack of closure of knowledge under implication matters. The first move is the educational version of David Hume's banishment of the sceptic: if we cannot dismiss him completely, we can at least suspend him until he desists from shouting down all our claims to knowledge, holus bolus.³⁸⁴ This is the standard practice: philosophy of education does not traditionally concern itself with the hyperbolic sceptical challenge, and neither is it of great interest in the classroom (unless it is a philosophy seminar).³⁸⁵ Some, such as Carr, however, claim that philosophy of education has been 'infected' with postmodern varieties of scepticism.

The second move for sidelining the sceptic's argument from ignorance is via the principle of closure. Here I offer a pair of options, one pragmatic and one neo-Moorean.³⁸⁶

- a. We fallible humans do not exhibit logical omniscience. Our belief-sets are not logically watertight, nor could they ever be so, in toto, in practice. We typically hold so many beliefs that the act of calling pairs of them to our conscious attention and inspecting them for logical compatibility would take an impracticably long time. Furthermore, like painting the Forth railway bridge, once this task was ostensibly completed we would have to start again because of the appearance, during the time taken for the first pass, of a large number of new beliefs needing to be checked both against each other, and against the existing body of beliefs, for the desired closure under logical entailment. Even if this feat could be achieved, there is the further complication that the process is not essentially a linear one (as the Forth railway bridge metaphor implies) but involves manoeuvring through a highly

³⁸⁴ Hume asserts that 'the great subverter of . . . scepticism, is action, and employment, and the occupations of common life. These [sceptical] principles may flourish and triumph in the schools, where it is indeed difficult, if not impossible, to refute them. But as soon as they leave the shade, and by the presence of the real objects, which actuate our passions and sentiments, are put into opposition to the more powerful principles of our nature, they vanish like smoke and, and leave the most determined sceptic in the same condition as other mortals'. David Hume (1748) *An Enquiry Concerning Human Understanding*, Section XII, Part II, para. 83. *Classics of Western Philosophy* [ed. Steven Cahn] (Indianapolis: Hackett Publishing Company Inc, 1999), p.693.

³⁸⁵ Even here it does not gain much purchase. There is a performative contradiction in asking a philosophy student to hand an essay on scepticism in to a lecturer, the existence of whom, together with the rest of the external world, he has argued can never be known.

³⁸⁶ G.E. Moore in a (1939) paper 'Proof of an External World', wrote: 'I can prove now, for instance, that two human hands exist. How? By holding up my two hands and saying, as I make a certain gesture with my right, "Here is one hand," and adding, as I make a certain gesture with the left, "and here is another."' Reprinted in Robert R. Ammerman (ed.) *Classics of Analytic Philosophy* (Indianapolis: Hackett Publishing Company, Inc.), p.81

complex, interconnected web of beliefs. The specific chronology of our inspections will thus powerfully determine the outcome of the process. In other words, the order in which we check and reject certain beliefs will affect radically what the final belief-set will be. This is a characteristic of complex systems: that minor changes in initial conditions, and apparently trivial interventions, have major consequences.³⁸⁷ So closure of knowledge is neither needed nor possible in practice.

- b. Although the logical treatment of the sceptical hypothesis [*h*] is traditionally couched in the form of material conditionals, this seems to be a mistake. We do not really believe that the *genium malignum* exists, so the proper form – I suggest – is the counterfactual subjunctive conditional: ‘Were it to be the case that the *genium malignum* existed, then we would not know that *p*.’

$$h \square \rightarrow \sim K_s p$$

This conditional is a true statement for any value of *p*, even if we do not accept the antecedent, *h*. The tempting (but illicit) move to make here is to apply *modus tollens*, by assuming $K_s p$ and concluding $\sim h$. But, as we saw earlier (p.39), subjunctive conditionals do not contrapose, so we *can* assert “ $K_s p$ ”, yet still be agnostic on the matter of *h*. Put simply, our claiming to know ‘that *p*’ has no bearing on the existence, or otherwise, of the *genium malignum*. This is a relief for educators, for were we to be forced to take the sceptical hypothesis seriously, we would not be in a position to regard *any* beliefs as constituting knowledge, and this would undermine our role vis-à-vis the cultivation of such ‘knowledge’.

Once the extreme sceptical position [*h*] has been neutralised – at least for educational purposes – we can propose that the more distant implications of each fragment of knowledge in which we believe need not be considered. The requirement for closure of knowledge under logical entailment, I take to be confined to those propositions which are closely connected to the fragment in question. Defining ‘closeness’ is problematic, and will vary according to the particular subject in hand, and the nature of the learners, but appealing to an Aristotelian mean between the extremes of (i) entailments

³⁸⁷ Meteorologist Edward Lorenz famously gave a seminal conference-paper on the topic of complexity/chaos theory which drew attention to these phenomena. Edward Lorenz (1972) ‘Does the Flap of a Butterfly’s wing in Brazil Set Off a Tornado in Texas?’ (Washington DC, USA).

associated with distant sceptical hypotheses and (ii) no entailments at all, will at least point the way to a solution.

Analysing Learning, Using Reliabilist Virtue Epistemology and AI Theory

Now we shall return to Artificial Intelligence theory. Having earlier explored the work of Alchourrón, Gärdenfors and Makinson, we next consider how it might mesh with reliabilist epistemic virtue and with the processes of learning. As part of this discussion, the ‘Levi identity’ is introduced. One outcome of this is the importance of the hinterland of propositions which support a proposition p , including those of the counterfactive class, $\sim p$ (which we saw earlier was important for a belief’s being ‘sensitive’).

Belief Revision and Epistemic Virtue

Belief-revision, then, is a process by which a new proposition, p , is added to the learner’s stock of beliefs, and compensations are made elsewhere in his doxastic web. In the AGM theory, the disturbances caused by the introduction of any new knowledge obey a principle of “informational economy”, according to which no belief is to be given up unnecessarily.³⁸⁸ This, as we have seen, is akin to Quine’s ‘minimum mutilation’ criterion. Furthermore, AGM incorporates the ‘Levi Identity’,³⁸⁹ which states:

$$C * p = (C - \sim p) \oplus p$$

I shall use this equation to link several of the key ideas discussed so far. My first task here is to unpack the meaning of the Levi identity, before considering its implications for learning. In essence, belief revision is defined as an operation composed of belief contraction and belief expansion: a sequence we can think of as a scouring followed by a re-filling. ‘ $C * p$ ’ can be read as ‘Belief revision of knowledge-corpus C , by incorporating a piece of new knowledge p ’. The introduction of p to the existing set of beliefs, C , causes revisions to be made to C . The right-hand-side asserts that this

³⁸⁸ Pollock & Gillies (2000) op. cit., p.71.

³⁸⁹ I have used the version of Isaac Levi’s equation in Pollock & Gillies (2000) op. cit., p.72 [with minor modifications for consistency].

process of belief revision consists of a belief contraction (⊖) and a belief expansion (⊕). The belief contraction part is particularly interesting because it involves one of the recurring themes of the present work: counterfactuals. In the belief-contraction phase of belief revision, we remove from our belief-web (C) the counterfactive ($\sim p$). This removal is not a simple subtraction from our stock of beliefs, however. Because our beliefs show some measure of coherence (although not in practice, as I have argued, to the extent of being closed under logical entailment [see p.170]), removing $\sim p$ and other propositions closely implied by $\sim p$ may not be a trivial matter. Once this contraction operation is carried out, though, p can be deployed in expansionary mode, and further amendments made to the existing belief-corpus C , as a result of incorporating p and its close implications.

A more formal version of Quine's 'minimum mutilation' relies on the notion of epistemic entrenchment. There is an ordering of 'degree-of-entrenchment', which allows decisions to be made over what to discard and what to keep. Seung Hwan Kang and Sim Kim Lau explain the process thus (although the authors do not recognise their philosophical forebear, Quine):

In each case when a new belief is considered by a belief revision operator, a ranking for the new belief will be assigned based on its entrenchment ordering. In applying the contraction operator, [the] epistemologically least entrenched sentence is retracted first to allow minimal loss of information.³⁹⁰

Frances Johnson attempts to define a concept which we might consider to be cognate with Kang & Lau's 'entrenchment ordering' more thoroughly:

The tuple *belief, degree-of-credibility* contains the belief and its input credibility as specified by the user (where *degree-of-credibility* ranges from 0 to 1 – with the higher number indicating greater credibility) ... It is this input credibility that will be used when selecting culprits for removal – the least credible beliefs underlying an inconsistency should be removed.³⁹¹

If 'entrenchment ordering' does depend upon 'input credibility', then this points to possibilities for a construal of these operations which involves acting from intellectual

³⁹⁰ Seung Hwan Kang and Sim Kim Lau (2007) 'Ontology Revision on the Semantic Web: Integration of belief revision theory', *Proceedings of the 40th Hawaii International Conference on System Sciences*. We can take 'belief revision operator' here to translate into 'epistemic agent', since we are dealing with human beings not computers

³⁹¹ Frances L. Johnson (2004) *Dependency-Directed Reconsideration* (NY, NY: The State University of New York), pp.1-2 [Italics in original]. Johnson's use of the word 'tuple' looks slightly odd when referring to what would usually be called a duplet – his term normally being reserved for larger groupings, in the form of 'quintuple', 'octuple' or 'n-tuple'. However, it has the specialist meaning in computing of 'a data structure consisting of multiple parts'. *Concise Oxford English Dictionary* (2009)

virtue, for such virtue can regulate input credibility. We next look at how this might take place, beginning with an implementation of the Levi identity:

$$C * p = (C - \sim p) \oplus p$$

Firstly, the proposition p has to come to the attention of the learner and be entertained for long enough for the relevant intellectual virtues – whether of a Zagzebskian or a Sosa-ish stripe – to be brought to bear upon it. If it comes from a prima facie credible source (for example, from the testimony of a teacher), then it is reasonable for the learner to initiate the process of belief-revision ($C * p$), in the absence of any of the standard warning signs of ‘deceit, confusion or mistake’.³⁹² Let the proposition be the uncontroversial one that ‘pheasants are birds and can fly’. When we turn to the right-hand side of the equation, and the learner begins expelling the counterfactive, $\sim p$, from any locations in which it may have lodged in his corpus of beliefs, C , no problem presents itself. Unless the learner has mixed up ‘pheasants’ and ‘peasants’, or some such mistake, the proposition $\sim p$ is unlikely to be present anywhere in his web, for this would require the learner to believe either that pheasants are not birds or that they cannot fly (or both). Thus, the contraction ($C - \sim p$) has no doxastic effect, for $\sim p$ was never a resident of C and so stands in no need of eviction. All that remains is for the learner to carry out the expansion ($\oplus p$) and add p to his existing web of beliefs, by simple accretion. This causes no destructive mutilation; in fact it merely lengthens an existing thread of the web (that concerned with birds which are capable of flight) while leaving everything else intact. The learner now has a new enlarged belief set, C_1 , such that:

$$C_1 = (C_0 * p) = (C_0 \oplus p)$$

It also leaves undisturbed the learner’s view that teachers are in the category of those whose testimony is to be trusted, as a default position, when speaking of matters in their field(s) of specialisation. If, however, the learner would still believe the teacher-voiced proposition “that p ”, *even if it were to be wrong*, then his belief is insensitive. For Nozick (3) [$\sim p \square \rightarrow \sim B_s p$] to be ‘ticked’, the learner must be able to track the truth counterfactually. It seems to be the case that many testimonially-derived beliefs acquired in the classroom setting are thus not sensitive, for in these cases Nozick (3)

³⁹² Coady (1992) op. cit., p.47.

does not obtain. If the teacher were to be mistaken or even mendacious, the pupils might still believe her, for their trusting method of forming the belief ‘that p ’ is not alive to the counterfactual possibilities. Teacher assertions, however, are generally ‘safe’, for not easily would a teacher’s belief ‘that p ’ be false, where p is within her field of expertise. In an alternative world in which $\sim p$ were to be the case, the teacher would not be asserting that p . Let us turn next to an example.

Example of Non-sensitive True Belief Acquisition in the Classroom

A pupil times a simple pendulum for various angles of swing. He finds that longer angles take longer times and draws the conclusion that there is a relationship between period, T , and angle, θ (See *Figure 1*).

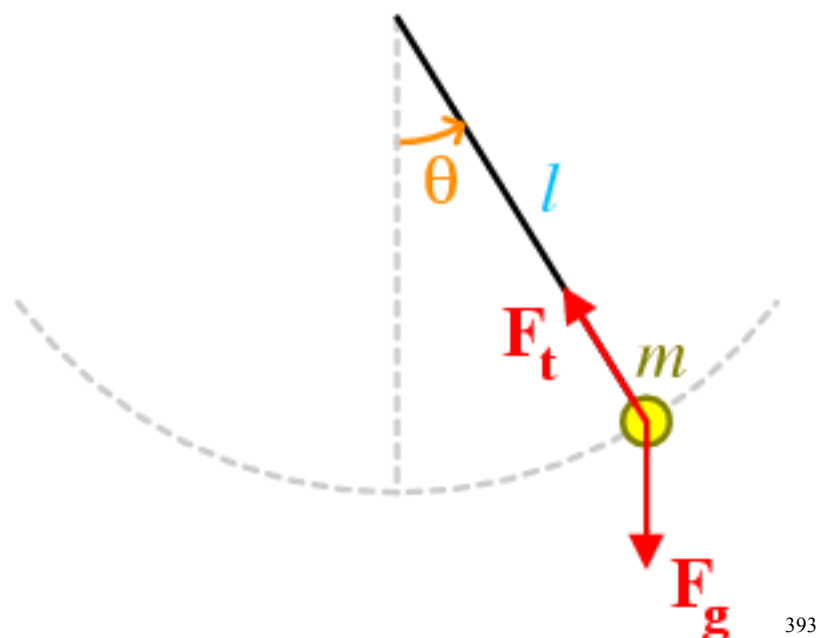


Figure 1 - Pendulum Experiment

The teacher contradicts this evidence and (correctly) claims that the formula for the period $[T]$ of a pendulum of length $[l]$ under gravity $[g]$ is as follows:

$$T = 2\pi \sqrt{l/g}$$

³⁹³ Source for diagram: <http://newton.ex.ac.uk/research/qsystems/people/sque/physics/simple-pendulum/pendulum-forces.gif>.

The angle of swing, θ , does not appear in this equation, so the pupil is deemed to be wrong: contra his experience, it is not the case that the angle of swing, θ , affects the period, T , of a simple pendulum. Stated positively, we can write p as that ‘the period, T , of a simple pendulum is independent of the angle of swing, θ ’. The pupil found evidence to suggest strongly that $\sim p$ is in fact the case, but he compliantly over-rides this with the teacher’s assertion “that p .” In fact, p only applies when the ‘small-angle theorem’ can be invoked (that is when $\theta \leq 10^\circ$), so the pupil is *right* to voice the opinion “that $\sim p$ ”, in the light of his first-hand experience, for he exceeded this limit of 10° in his experiment. In this scenario, Nozick (3) is not assertible, so the pupil’s belief ‘that p ’ is insensitive. So insensitive is it that even in the face of first-hand evidence he believes the testimonially-sourced version p rather than the (strictly-correct) version $\sim p$. Interestingly, in this situation, both p and $\sim p$ are correct, but not at the same time, for they apply over different ranges of angle. My point, though, is that pupils will sometimes ignore the evidence of their own eyes and accept a received version of events. This could be an instrumental use of belief rather than an instance of belief simpliciter, however. The pupil may well have learned that what is required to earn credit in examinations is the reporting of the ‘official view’ and not what he actually believes to be the case. We are reminded here of Freire’s complaint that ‘... the naming of the world is the task of an elite’.³⁹⁴

It is not only the teacher’s testimony that over-rides challenges from first-hand evidence, though: the pupils’ own existing beliefs may do this too. There has been much research on the tenacity of misconceptions (or, more kindly, ‘alternative frameworks’) in pupils’ minds.³⁹⁵ Another example from experiments with pendulums illustrates this phenomenon: pupils commonly believe that the mass of a pendulum-bob will affect its timing. Although in fact mass has no effect here [for, as we have seen, mass does not appear in the formula $T = 2\pi \sqrt{l/g}$], this is highly counter-intuitive, so pupils reasonably think that making a pendulum heavier will affect the rate at which it swings. The surprising fact is that learners do not easily abandon this intuitive

³⁹⁴ Paulo Friere (1970, tr. 1996) *Pedagogy of the Oppressed* [tr. MB Ramos] (New York: Continuum International Publishing Group inc.) p.90.

³⁹⁵ Kevin Leander and David Brown state that, ‘In recent years, there has been an explosion of research attempting to identify such conceptual misalignments, which are variously called misconceptions, preconceptions, alternative frameworks, children’s science, and so forth (for a bibliography including 4,500 references, see Pfundt & Duit, 1998)’ Kevin M. Leander and David E. Brown (1999) “‘You Understand, But You Don’t Believe It’: Tracing the Stabilities and Instabilities of Interaction in a Physics Classroom Through a Multidimensional Framework’, *Cognition and Instruction*, vol.17, no.1, pp.93-135. p.95.

counterfactive proposition, even in the face of compelling first-hand empirical evidence to the contrary. The faulty belief has a high degree of ‘epistemic entrenchment’, even though this does not derive from a virtuous evaluation of its ‘input credibility’.

The Importance of Counterfactuals for Learning

Thus, we see that a consideration of counterfactive propositions is an important part of virtuous learning. An encouragement to consider only p and ignore $\sim p$ is a deeply-flawed tendency in simplistic learning-outcomes focused technicism. It is important here to distinguish between the terms ‘counterfactive proposition’ and ‘counterfactual conditional’, so we shall briefly consider these and see how they relate to the notion of ‘false belief’.

Throughout this work, we have used p to indicate a proposition. This has usually been a true proposition (such as ‘Larissa is North of Fársala’), so anyone believing ‘that p ’ holds a true belief. In this case, $\sim p$ is contrary to the facts: it is a counterfactive proposition.³⁹⁶ An agent believing that $\sim p$ thus holds a false belief.

A counterfactual *conditional* is a different matter, however, and it is important not to confuse the two. In his seminal book, *Counterfactuals*, David Lewis gives the sentence, ‘If kangaroos had no tails, they would topple over’,³⁹⁷ as an example of a counterfactual conditional. The antecedent is not true; it is counterfactive. Were it to be held by an epistemic agent, it would be a false belief, for as a species kangaroos characteristically do have tails. But if in another possible world it was the case that kangaroos had no tails, then the consequent – that they would topple over – would be a highly plausible one. In fact, if the counterfactual conditional is valid, they would necessarily topple over in close possible worlds in which the antecedent is true, since these worlds would be identical to the actual world in most other respects. So the laws of balance would still apply and the lack of a tail would lead to toppling. Here we see the key difference between counterfactual conditionals and counterfactive propositions: the counterfactual conditional is true, but the counterfactive proposition which acts as the antecedent is false. This sort of reasoning is important in science, with respect to properties and unactualised dispositions. For example, I can truly assert that “Were I to

³⁹⁶ Charles W Kreidler (1998) *Introducing English Semantics* (London: Routledge) p.247

³⁹⁷ David Lewis (1973) *Counterfactuals*, [paperback edition] (Oxford: Basil Blackwell), p.1

drop this Waterford Crystal vase onto the pavement, it would break”, even though I have not in fact dropped it. The counterfactual conditional reports a property of glass: its brittleness. Our virtue epistemic interpretation of Nozick 3 employs a similar construction. The statement, ‘Were it to be the case that p is not true, s would not believe it’, reports a disposition of the agent to track the truth.

The upshot of the analysis above, and these examples, is that even in simple cases of uncontroversial learning ‘that p ’, the class of counterfactive propositions, $\sim p$, needs to be dealt with in three distinct ways:

1. by having mechanisms available which would alert the putative knower to the possibility that, despite the testimonial or other evidence that p , it might in fact be the case that $\sim p$. When p is derived from testimony, as we saw earlier in a discussion of Pinocchio (p.89), these mental mechanisms plausibly operate in the background and are triggered only in the event of certain cues indicating incompetence or insincerity on the part of the testifier, or by discovering significant and irresolvable clashes between the proposition p and the auditor’s existing web C ;
2. by carrying out a process of removing $\sim p$ and its corollaries from the learner’s existing stock of beliefs;
3. by attaching to p some defensible warrant, so that in the event of some future candidate ‘knowledge’ indicating $\sim p$, resources are available to protect p from derogation.

If any of these ways is missing, then the learning has been neither fully intellectually virtuous, nor warranted nor secure. Furthermore, in the case of (ii) (that is, counterfactive removal) not occurring, the learner does not really believe that p . For consistency, to believe that p requires the learner not to believe that $\sim p$ (together with all its implications), so even if $\sim p$ is not apparently present in the learners’ web, there is still a need on his part to inspect this web for the presence of $\sim p$ or its implications, to make sure that he truly is free of mental contamination by $\sim p$. This process can be taken too far, however. As we saw earlier (p.170), one distant implication of rejecting $\sim p$ and asserting “that p ” is that the world is knowable, and thus that the sceptical

hypothesis *h* (that there exists a *genium malignum*, who maliciously distorts all our perceptions) is untrue. Thus, only close implications ought to be considered.

In less simple cases, in which there is some sort of cognitive dissonance between the new proposition *p* and prior ‘knowledge’ *C*, the requirements placed on the learner to deal with candidate knowledge *p* virtuously are even more demanding. There is now the possibility of some significant change in the learner’s web occurring, a change which may mutilate the web rather than merely add another example to (say) a securely-enwebbed set of propositions that ‘x flies’, where x is a bird.

Socrates on Cognitive Dissonance

Plato contrasts the two types of stimulus (which we might call the consonant and the dissonant) thus:

Those experiences that do not provoke thought are those that do not at the same time issue in a contradictory perception. Those that do have that effect I set down as provocatives ...³⁹⁸

Socrates places a great deal of emphasis on the latter type of catalyst to learning: arguments and propositions which challenge the learner’s belief ‘that *p*’. We frequently find him engaging in dialogues with his companions that challenge their preconceptions and inflict upon them a momentary mental paralysis – his words acting like the sting of the torpedo fish.³⁹⁹ Socrates replies to Meno’s charge – that in some places he would ‘be arrested as a wizard’⁴⁰⁰ for his mind-numbing effects – with the defence that he only infects others with perplexity because he himself is perplexed. He is not just a contrarian. Indeed, it seems that Socrates is just as willing to undergo the disorientating effects of ‘contradictory perception’ as he is to cause them – all in the interests of capturing the prize of genuine knowledge. In the dialogue *Protagoras*, he describes the results of the Sophist’s words on him: “... at first I was like a man who had been hit by a good boxer; at his words and the applause things went dark and I felt giddy”.⁴⁰¹ This is in contrast to accounts in which the knowledge-acquisition proceeds without any sort of intellectual conflict, as in his metaphor for mathematical learning of

³⁹⁸ Plato, *Republic*, 523b-c.

³⁹⁹ Plato, *Meno*, 80.

⁴⁰⁰ Plato, *Meno*, 80b.

⁴⁰¹ Plato, *Protagoras*, 339e.

capturing a bird and shutting it up in one's aviary, to flutter about with the birds already there:

Socrates: And when he hands them over, we call it 'teaching' and when the other takes them from him, that is 'learning', and when he has them in the sense of possessing them in that aviary of his, that is 'knowing'.⁴⁰²

The dialectic continues, showing that the true belief represented by the bird is not to be classed as knowledge, for the fluttering about of the birds makes retrieval difficult and so one 'might catch a dove in place of a pigeon'.⁴⁰³ It is the freeness of the birds – their lack of tethering – that denies the aviary the status of a repository for knowledge. Instead of what we might see as a web-like structure in which fragments of knowledge are related to one another in systematic ways, we have a chaotic free-for-all of isolated propositions (although Socrates does describe some of the birds as gathering 'in flocks apart from the rest, some in small groups' as well as those which are 'solitary, flying in any direction among them all'⁴⁰⁴). More significant than this lack of inter-bird tethering, however, is the absence of any tethering to the world. The birds had been captured from their wild state,⁴⁰⁵ so, while they do represent true beliefs, their acquisition (or escape) was largely a matter of luck: their presence in the aviary was randomly-ordained rather than solidly justified. In this respect, they have much in common with the statues of Dædalus in the *Meno*, which, not being properly anchored by a knowledge of causes, can wander about freely.⁴⁰⁶ The instability of the birds/statues/propositions can be overcome, claims Socrates, by means of 'an account (λόγος)'.⁴⁰⁷ This ties in nicely with (iii) above, in that by attaching some defensible warrant to p , we increase its stability. In the event of a future indication that $\sim p$ might be the case, we have the resources to keep p in the aviary rather than releasing it (as long as the warrant for p is firmer than the warrant for $\sim p$.) Put differently, p has a greater 'epistemic entrenchment' than $\sim p$, in virtue of its 'input credibility', to reprise the more recent phrases of Johnson and Kang & Lau.

In virtue-epistemology terms, the admission of 'birds' to our mental aviaries ought to be carried out judiciously, in that we should not allow entry without a warrant. In Plato's avian mathematics lesson, the teacher 'hands them over' without such a

⁴⁰² Plato, *Theætetus*, 198-b.

⁴⁰³ Plato, *Theætetus*, 199b.

⁴⁰⁴ Plato, *Theætetus*, 197e.

⁴⁰⁵ Plato, *Theætetus*, 197c.

⁴⁰⁶ Plato, *Meno*, 97d.

⁴⁰⁷ Plato, *Theætetus*, 201d.

warrant. Furthermore, even in the case of uncomplicated belief-expansion, this warrant needs to be attached like a badge to the proposition so warranted, so that the putatively warranted claims of a future (contrary) proposition to displace the original can be checked for legitimacy against the established warranted claims of the incumbent. This combination of proposition plus warrant is congruent with Johnson's 'tuple *belief, degree-of-credibility*',⁴⁰⁸ and can be regarded, I suggest, as the fundamental unit of belief-revision and virtuously-reliable propositional learning.

We have seen, though, that even apparently straightforward cases of belief-revision by expansion are more complex than they first appear. In particular, the expansion of our original aviary (C_0) to C_1 , represented by $C_1 = (C_0 \oplus p)$ is an oversimplification, for it implies that we can accept propositions willy-nilly, provided that they do not clash with our existing belief-set. We have shown that this is not legitimate, for any lack of warrant leaves the proposition p defenceless in the face of a potential, future, freely-admitted counter-proposition $\sim p$. However, if the interloper has no warrant either, there is no reason to prefer one over the other, so the sitting tenant will remain. Next, an approach to these 'contradictory perceptions' or 'provocatives',⁴⁰⁹ as Plato calls them, is offered.

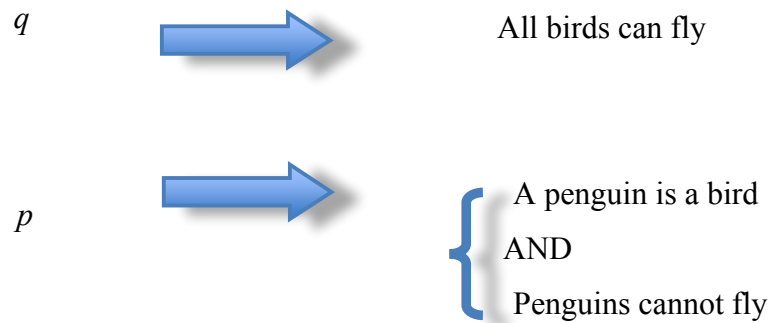
Legislating Between p and $\sim p$ in the Learning Situation

Returning again to the Levi identity, $C * p = (C \ominus \sim p) \oplus p$, we see that it is the contents of the brackets which are important in understanding the effect of 'provocatives'. Let us take the new proposition p , which is a candidate for addition to the learner's corpus, to be that 'Penguins are birds and cannot fly'. Let us further propose that the learner had hitherto proceeded by induction from some previous knowledge about birds (crows are birds and can fly; magpies are birds and can fly; pheasants are birds and can fly ...) to generate the proposition q that 'all birds can fly'.

⁴⁰⁸ Johnson (2004) op. cit., pp.1-2.

⁴⁰⁹ Plato, *Republic*, 523b-c.

In the learner's mind, there is now an incompatible set of propositions:



Accepting the truth of p requires denying the formerly-held belief that q .

$$p \rightarrow \sim q$$

Furthermore, by modus tollens: $q \rightarrow \sim p$

So, in terms of belief-revision, $C * p = (C - \sim p) \oplus p$

Can now be written as: $C * p = (C - q) \oplus p$

The learner has now apparently to evict the proposition that q (all birds can fly) wherever it has made a home in his belief-web, as well as adding the proposition that p (penguins are birds and cannot fly). Not only that, he ought also to identify and remove nearby implications of q (for example, that 'all birds are a potential danger to aircraft', 'no birds can be fenced in' ...).

This is not the only course of action available to the young learner, however. His warrant for believing that q ('all birds can fly') appears to be strong. He has observed many birds in flight and has been told by people whose testimony he trusts that they are 'birds' and that their method of travel is called 'flying'. Forming the view that the ability to fly is an essential feature of the class of living things termed 'birds' is an eminently virtuous intellectual action. As it turns out, the learner's inductive reasoning was a case of over-generalisation, but this could not have been predicted by him in advance of the 'provocative' p coming to his notice, any more than the historical assumption that 'all swans are white' could have been seriously doubted in advance of Abel Tasman's discovery of black swans. So, the learner may well resolve the cognitive conflict in ways such as:

1. Penguins must not be birds.
2. My teacher is joking.
3. My teacher's testimony is wrong.
4. I shall ignore this strange new fact.
5. Penguins can fly, but they don't want to.
6. Just because scientists have never seen a penguin flying doesn't mean that they can't.
7. Most birds can fly, but not penguins.

Deciding which explanation to plump for is itself a matter requiring intellectual virtue. The principle of minimum mutilation also has a part to play, in that the explanation which is plausible enough to resolve the conflict, yet does the least harm to the learner's pre-existing web of beliefs, is the preferred option. 'My teacher is joking' initially meets these criteria. If, however, *p* is confirmed by his parents, then the learner can either decide that this is another adult epistemic conspiracy⁴¹⁰ such as the Santa Claus story, or choose a different explanation (or resolve to ignore this strange new fact). Quine's principle of 'minimum mutilation' or Zagzebski's similar one of "informational economy", according to which no belief is to be given up unnecessarily,⁴¹¹ means in this case not relegating the teacher from her position of being one in whom we can have '... proper trust of authority outside [one's] area of expertise',⁴¹² unless he has no other option. Explanations (5) and (6) fail once the relative shortness of penguins' wings is pointed out.

The final candidate for the resolution of the learner's epistemic predicament is 'Most birds can fly, but not penguins' – a statement which accommodates the new knowledge *p* that 'penguins are birds and cannot fly', yet requires minimal adjustments elsewhere. It is still true, by and large, that 'All birds can fly', if penguins, kiwis and so on are treated as exceptions to a general rule. This allows strictly false implications such as 'a bird's-eye view means a view from above' to remain, unaffected, in the learner's belief-set. Such a strategy can be a reasonable one, but not if it acts as an impregnable defence against recalcitrant experience. We can imagine a situation in which a general belief is under attack from challenging first-hand or testimonial evidence, but the learner simply constructs more and more elaborate 'epicycles' to save the theory.

⁴¹⁰ He probably would not use this terminology, but could still have the concept.

⁴¹¹ Pollock and Gillies (2000) *op. cit.*, p.71.

⁴¹² Zagzebski *VOM*, p.319.

One common defensive action to save a well-entrenched belief is to dismiss troublesome candidates for belief as merely localised aberrations. For example, the belief that objects of greater mass fall more quickly than less-massive ones (and similar beliefs about pendulums) is saved from attack in the form of contrary laboratory evidence, by considering the lab to be somewhere special and remote from real life. The learner can thus believe both p and $\sim p$, but confine each of the opposing beliefs of the antinomy to its own domain and thus avoid simultaneity and hence dissonance. “In the lab”, he might say, “heavy and light objects may fall together, but not in the real world.” This partitioning is given further legitimacy by the fact that many light objects (for example a piece of paper) are affected more significantly by air-resistance, and so do actually fall more slowly as a result of this drag (unless folded into a more aerodynamic shape, such as a paper aeroplane). However, this partitioning can act as a barrier to learning unless teachers (following Socrates) instead make use of the tension inherent in the dissonance, by drawing attention to it and prompting the learner to address it, if not resolve it, in a pedagogically-productive way. Howard Gardner labels such productive uses of dissonance ‘Christopherian Encounters’ (after the explorer Christopher Columbus) and suggests that in such encounters, ‘you expose your theories to disconfirmation. If your theories are consistently disconfirmed, you will slowly abandon them and hopefully construct better theories’.⁴¹³

There was also the mediæval tradition of scholastic disputations, and the *Dissoi Logoi* of the Sophists. This latter was an anonymous moot book written around the late fifth century or early fourth century BCE.⁴¹⁴ By putting both sides of various questions (in chapters concerning ‘Good and Bad’, ‘Seemly and Disgraceful’, ‘Just and Unjust’, ‘Truth and Falsehood’ and a section on ‘The Demented and the Sane’) it could well have formed the basis for teaching. For example, students could consider the circumstances in which damage to shoes can be a good thing: ‘(5) ... if shoes are worn out and ripped apart, this is good for the cobbler but bad for everyone else’.⁴¹⁵ Similarly, they might discuss cultural differences over bodily decoration: ‘(13) To the Thracians it is an ornament for young girls to be tattooed, but with others tattoo-marks

⁴¹³ Howard Gardner (1991) *The Unschooled Mind*, in Howard Gardner (2006) *The Development and Education of the Mind: The selected works of Howard Gardner* (Abingdon: Routledge) p.140.

⁴¹⁴ According to D.T.J. Bailey (2008) ‘Excavating *Dissoi Logoi* 4’, *Studies in Ancient Philosophy*, 35, pp.249-264, p.249.

⁴¹⁵ Anon. (Date: ‘after the Peloponnesian War’) ‘*Dissoi Logoi* or *Dialexeis*: Two-fold arguments’ [tr. Rosamond Kent Sprague] *Mind*, vol.LXXVII, no.306, April 1968, pp.155-167, p.156.

are a punishment for those who do wrong'.⁴¹⁶ The overall message of the 'two fold arguments' is that p is the case for some people in some circumstances, while $\sim p$ obtains for others.

Elenetic Moves to Cause an Aporia

The characteristic Socratic approach is to use relentless elenchus to nudge the learner towards a clash (such as apparently believing both p and $\sim p$) and thereby bring him to a state of confusion. We see this in the *Meno*, when the slave boy believes wrongly that a square of area 8 foot² has sides double that of a square of area 4 foot². Socrates diagnoses the problem:

Socrates: ... Now he thinks he knows the length of the side of the eight foot square.

Meno: But does he?

Socrates: Certainly not.

Meno: He thinks it is twice the length of the other.

(Plato, *Meno*, 82e)

In order to show that the slave boy's intuition is wrong, Socrates demonstrates that in fact a square of area 16 foot² has sides double that of a square of area 4 foot². Since the problem set by Socrates is to find the side of a square of area 8 foot² – or to find $\sqrt{8}$ in modern notation – the belief expressed by the slave does not produce the desired solution. Meno's slave's original intuition is p – that doubling the sides of a square doubles its area – but by comparing squares of sides 2 foot and 4 foot, Socrates shows that in actuality p is not the case. The slave now believes both p (from his own intuition) and $\sim p$ (from Socrates' demonstrated counterexample). Clearly one version ought to give way in this cognitive dissonance, so the slave accepts that his own initial answer was wrong. Since the first square had side of 2 foot, and doubling this to 4 foot did not produce the desired area of 8 foot², the slave quite reasonably interpolates between 2 foot and 4 foot, so guesses that 3 foot might be the answer. In showing that this too is incorrect, Socrates has brought the boy to the desired aporia:

⁴¹⁶ Anon., op. cit., p.158.

Boy: It's no use, Socrates, I just don't know.

Socrates: ... At the beginning, he did not know the side of the square of eight feet. Nor indeed does he know it now, but then he thought he knew it and answered boldly, as was appropriate – he felt no perplexity. Now however he does feel perplexed. Not only does he not know the answer; he doesn't even think he knows.⁴¹⁷

Meno: Quite true.

(Plato, *Meno*, 84a-b)

The boy has now achieved some insight into his epistemic predicament and has recognised an aporia. He does not yet possess Sosa's reflective knowledge, for this is 'apt belief aptly noted',⁴¹⁸ but he does have what we might call 'inapt belief aptly noted'. In other words, he knows that his first-order belief is faulty. The dialogue shows that this metacognition may well assist the boy to progress epistemically.

Socrates: So, in perplexing him, and numbing him like the sting-ray, have we done him any harm?

Meno: I think not.

Socrates: In fact, we have helped him to some extent toward finding out the right answer, for now not only is he ignorant of it but he will be glad to look for it ...

(Plato, *Meno*, 84b)

We recall that Sosa's 'virtue-perspectivism' (the description he uses to label his brand of faculty reliabilism) allows for two grades of knowledge, namely animal knowledge (K) and reflective knowledge (K⁺). The latter is a higher grade of knowledge, for not only do we know (in the sense of having an apt belief, that is, a belief which is accurate because of ouradroitness), we also know that we know (K_s K_sp). Despite its Rumsfeldian overtones, this notion is not foreign to educational thinking, having much overlap with concepts such as John Flavell's metacognition⁴¹⁹ and Chris Argyris'

⁴¹⁷ Interestingly, Islamic ethics labels these two states of (i) not knowing and (ii) not even realising that one does not know, 'simple ignorance' and 'compound ignorance', respectively. We can view these as the negative correlates of Sosa's 'reflective' and 'animal' knowledge. The Islamic approach here is Aristotelian in nature, dealing with Excess, Deficiency and Moderation, which, for the intellect, become Slyness, Stupidity and Wisdom respectively. 'Slyness is the excessive use of the intellect; that is, using the power of the intellect in matters for which it is inappropriate, or using it too much in matters for which it is appropriate.' Muhammad Mahdi ibn abi Dharr al-Naraqī (n.d., Late 18th century) *Jami' al-Sa'adat* (The Collector of Felicities) [tr. Shahyar Sa'dat] *al Tawhid Islamic Journal* [online] Available at: <http://www.al-islam.org/al-tawhid/felicities/3.htm> [Accessed 5 June 2010], Section 2, Moral Virtue and Vices

⁴¹⁸ Ernest Sosa (2007) *A Virtue Epistemology. Apt Belief and Reflective Knowledge*, vol.I (Oxford: Oxford University Press) p.32.

⁴¹⁹ Flavell, reprising his seminal 1976 work, explains that 'It is called *metacognition* because its core meaning is "cognition about cognition". Children not only think when solving a problem, but they also learn to think about thinking ...' John H. Flavell, Patricia H. Miller & Scott A. Miller (2002) *Cognitive Development* [4th Edition] (Englewood Cliffs, NJ: Prentice-Hall) p.164.

double-loop learning⁴²⁰, as well as parallels with Donald Schön's reflective practice (specifically reflection on action).⁴²¹ This new perspective alerts our learner to his state of incompetence: in William Howell's words, he has ascended from a state of unconscious incompetence to one of conscious incompetence.⁴²² Having his ignorance exposed thus means that the way is then clear for the putative knower eventually to acquire not 'mere' knowledge (or 'animal' knowledge, in Sosa's repertoire) but an elevated class of knowledge which has both a substantive, cognitive part and a self-monitoring, metacognitive part. But we are getting ahead of the narrative; the slave boy has only just come to realise that a particular one of his beliefs is false.

Under the Alchourrón, Gärdenfors and Makinson (AGM) paradigm, the boy is now beginning the process of belief-revision by contraction: that is, a belief he previously held has been rejected. When this aporia is reached, the possibility of an epiphany is newly present. The nature of this illumination, and the subsequent new path revealed, is one which varies according to the seeker, his epistemic ambitions, and the context in which he finds himself. In particular, there is a contrast between (i) the pedagogical situation in which a path needs to be constructed connecting the learner's pre-existing knowledge and his new, but pre-ordained, insight (perhaps one of Meyer & Land's 'threshold concepts') and (ii) the zetetic one, in which a genuinely new trail is being blazed.

Notwithstanding his claims to be merely 'helping' Meno's slave to arrive at the correct solution to the geometrical problem by purely maieutic methods, Socrates is arguably too directive in the dialogue, prompting Bertrand Russell's complaint that he (Socrates) '... has to ask leading questions which any judge would disallow'.⁴²³ The final moves which lead Meno's slave to a correct solution seem to me to involve Socrates teaching directly by telling rather than by the claimed maieusis:

⁴²⁰ Chris Argyris (1999) *On Organizational Learning* [2nd Edition] (Oxford: Blackwell) p.68.

⁴²¹ Donald A. Schön (1987) *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass).

⁴²² William Smiley Howell (1982), in *The empathic communicator* (Belmont, CA: Wadsworth Pub. Co.), develops a theory of competence-growth which runs: unconscious incompetence; conscious incompetence; conscious competence; unconscious competence. Cited in Sheila Furness (2005) 'Shifting sands: Developing cultural competence', *Practice*, vol.17, no.4, pp.247-256, p.252. We note that Howell's model was originally for communicative competence, but it has since been applied to other types of competence. For example, Furness uses it to categorise the development of cultural competence in the individual.

⁴²³ Bertrand Russell (1961) *History of Western Philosophy* (London: Unwin University Books) p.110

Socrates: Now does this line going from corner to corner cut each of these squares in half?

(Plato, *Meno*, 84e)

or

Socrates: The technical name for it is ‘diagonal’; so if we use that name, it is your personal opinion that the square on the diagonal of the original square is double its area?

(Plato, *Meno*, 85b)

In response to both of these statements disguised as questions, Meno’s slave merely has to answer “yes”. Socrates leads the way to the solution he knew all along; there has been no new trail blazed here.⁴²⁴

The *Feldwege* and the *Holzwege*: Two Kinds of Learning Journey

We find Sara Kofman mirroring this distinction, in separating the Greek *odos* ‘a path or road connecting knowns’ from *poros* ‘a passage across a chaotic expanse, a sea-route, for example’.⁴²⁵ We see that such a classification in turn parallels Heidegger’s contrasting of *Feldwege* (a path through a field which is already laid out for us) and *Holzwege* (a path through a wood, which we make as we go).⁴²⁶ The distinction is of great importance in education, for it speaks to the broad difference between instruction and enquiry. In the one, we guide the pupil unambiguously to the town of Larissa; in the other we help him to explore the surrounding landscape of the Thessaly periphery, acting as a co-pioneer. Both can represent virtuous actions on the part of the teacher, but perhaps the *Holzwege* allows for greater learner autonomy, intellectual ownership and happily accidental discoveries.

⁴²⁴ The conclusion of this dialectic is that the boy too knew the solution all along. The *Meno* illustrates Plato’s theory of *anamnesis*, by bringing Meno’s slave boy to a correct geometrical conclusion and adducing this as evidence that the boy must have had this knowledge since before he was a man, because he never learned geometry in this world.

⁴²⁵ Sarah Kofman (1988) ‘Beyond aporia?’, Andrew Benjamin (ed.), *Post-Structuralist Classics*, (New York: Routledge), p.10, In Nicholas C. Burbules (2000) ‘Aporias, Webs and Passages: Doubt as an Opportunity to Learn’, *Curriculum Enquiry*, 30:2, p.175. Gerard Cuperus transliterates the Greek differently, explaining that, ‘*Poros* is opposed to *hodos*, a public road that is clearly laid out. A *poros* is, instead, a way that has to be found’. Gerard Cuperus (2007) ‘Traveling with Socrates’, Gary Alan Scott (ed.) (2007) *Philosophy in Dialogue: Plato’s Many Devices* [paperback] (Evanston, IL: Northwestern University Press) p.204. Sarah Kofman’s spelling is, however, used in modern Greek for a motorway: as in Αττική Οδός, the six-lane Athens ring road. It also appears in the English word for a car mileometer: ‘odometer’.

⁴²⁶ Charles S. Taylor (1998) ‘Holzwege and Feldwege in Cyberwald: The Multimedia Philosophy Lecture’, *Ejournal*, vol.8, no.1.

The thrill of the *Holzwege* needs to be tempered, though, with much traditional following of the *Feldwege* (particularly with younger learners) to build up both confidence and a set of concepts that will be needed when departing from the beaten track. Credulity is not a vice in the early years. Notwithstanding the security of the *Feldwege*, it is by setting out on the riskier *Holzwege*⁴²⁷ that the likelihood of serendipitous finds opens up. This use of serendipity ('an assumed gift for finding valuable things not sought for'⁴²⁸) is not, I suggest, a dispensable luxury in education, because without it much of the experience involves zemblanity ('The opposite of serendipity, the faculty of making unhappy, unlucky and expected discoveries by design'⁴²⁹). Not all discoveries so designed are unhappy, of course, but too strong an emphasis on arriving at a pre-ordained proposition p , without entertaining the possibilities of $\sim p$ being the case, disbars the learner from exercising intellectual virtues other than Zagzebski's 'being able to recognize reliable authority'.⁴³⁰

Sosa and Belief Revision

We now return to Sosa's AAA ('accuracy, adroitness, aptness.'⁴³¹) structure of knowledge, which uses the metaphor of an archer hitting a target representing true belief. In the light of the discussions in this chapter, particularly the notion of belief revision, it is clear that this model is itself in need of revision.

To avoid holding impossible, or merely incompatible, propositional knowledge p and $\sim p$ simultaneously, hitting an isolated target cannot be seen as sufficient for knowledge-claims. To modify Sosa's toxophilic allegory, the arrows must first be removed from previous target-beliefs, which are incompatible with the newly-hit targets and so must be derogated. Furthermore, any simplistic account of education, which only involves reaching prescribed targets, misses the importance of non-

⁴²⁷ Riskier in the sense of possibly unproductive. A German colleague, Cordula Hansen, points out that the word *Holzwege* also carries the negative connotation captured by the English idiom 'up the garden path'; in other words, it might be the wrong road.

⁴²⁸ Philip Babcock Gove (ed.) (1993) *Webster's Third New International Dictionary* (Cologne: Könenmann).

⁴²⁹ William Boyd (1998), *Armadillo* (London: Hamish Hamilton) ch.12. According to Simon Hertnon, Boyd coined this word from the Russian archipelago *Nova Zembla* 'a barren former nuclear testing ground in the middle of the icy Arctic ocean'. Simon Hertnon (2008) *From afterwit to zemblanity* (Auckland, NZ: New Holland), p.210. Hertnon gives a quotation from Steven Hayes (2007) as an example of this word in use: 'I hate mission statements. They are second only to educational outcomes for zemblanity.' Hertnon, *ibid*, p.211.

⁴³⁰ Zagzebski (1996) *VOM*, p.114.

⁴³¹ Sosa (2007) *op. cit.*, p.22.

prescribed counterfactuals, a body of propositions which have been shown throughout this chapter to be crucial to the knowledge-acquiring enterprise.

Hitting a target has only a provisional quality, and the target p needs somehow to be labelled with a justification for being hit, so that it can be defended against (i) future attempts to remove the arrow from p and assert that $\sim p$ and (ii) the charge that one of the implications of p is incompatible with another proposition q . A knowledge of the relative warrants for q and $\sim q$ depends on the strengths of justification for q and p , since $p \rightarrow \sim q$. Thus, by closure, one has to have a strong justification for p , not just for its own sake but also to be able to adjudicate over the question of rival proposition q . Significantly, in a very recent book (2011), Sosa replaces his image of an archer aiming at a single, static target with a huntress, Diana, either selecting and aiming or ‘forbearing’ to aim at various moving quarry. Here, the notion of aptness is joined by one of ‘meta-aptness’, which Sosa defines as follows:

A shot is meta-apt iff it is well selected: i.e., if it takes appropriate risk, and its doing so manifests the agent’s competence for target and shot selection.⁴³²

So the learner has a role in choosing which beliefs to target, rather than always being required to aim at prescribed propositions, and he deserves second-order credit for selecting well, in addition to first-order credit for acquiring a true belief thanks to his epistemic virtue. A flock of rival propositions thus ought to be available to the learner sometimes, to enable meta-aptness to be practised. The learner is then animated by the virtues of enquiry. He ought also to be invited to provide a rationale for his choice, so that his knowledge ascends to Sosa’s higher grade of knowledge, K^+ , by his attaining an epistemic perspective on it so that it becomes ‘apt belief aptly noted’.

Finally, an illustrative example of using intellectual virtue in dealing with counterfactuals in an educational setting.

Virtuous Counterfactuals in the Classroom

If a permanent bar-magnet is plunged into a long coil, the cutting of the magnet’s field lines by the turns of the coil produces a current. This current flowing in the coil itself gives rise to another, temporary, magnetic field, with a shape similar to that of the bar

⁴³² Ernest Sosa (2011) *Knowing Full Well* (Princeton: Princeton University Press), p.8.

magnet. The question now is, ‘What is the polarity of the newly-created magnetic field?’ One approach is to use a *Gedanken* experiment, together with counterfactual thinking, to arrive at the answer. My suggestion is that this pedagogical method is more epistemically sound than simply telling or showing the pupils what the polarity is (or perhaps merely helpfully encoding it into a mnemonic for easy memorisation).

Let us say that the N-pole of the magnet is being dropped downwards into the top end of the coil, which is arranged vertically (see fig.2). Since there are only two possible magnetic poles – N and S – the top of the coil, X, must now either be a N or S pole⁴³³ (See *Figure 2*).

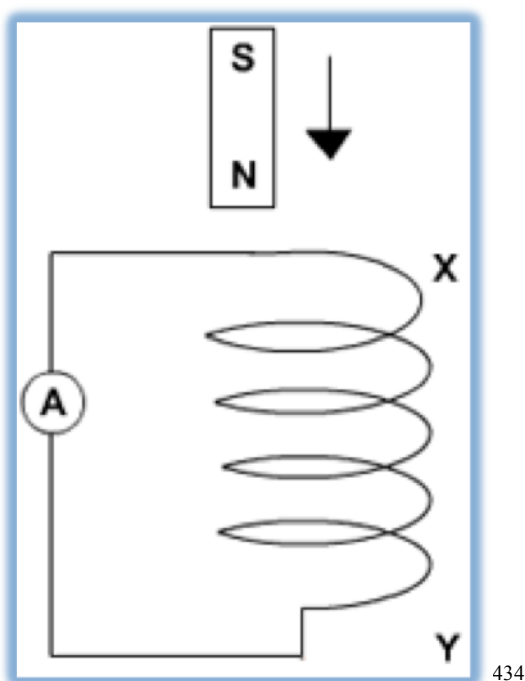


Figure 2 - Bar Magnet Dropped into a Coil

It is tempting just to tell the students that X will in fact also be a N-pole (that is, the same pole as that of the bottom of the permanent magnet) but it is more interesting to consider both possibilities and start with the counterfactive statement $\sim p$: [if a N-pole is plunged downwards into a coil, the top of the coil will be a S-pole]. In setting up this

⁴³³ The current could also be zero, so a third possibility is that the field produced by the coil is neither N nor S but zero. That this is not in fact the case could be demonstrated by connecting a galvanometer to the coil and separately testing for the presence of a magnetic field by a small ‘plotting compass’. This latter would have to be performed without the bar-magnet, but with a battery to supply the current. We can then insist on either p or $\sim p$ and exclude the middle. The propositions p and $\sim p$ are hence mutually exclusive and jointly exhaustive.

⁴³⁴ Diagram from: http://www.s-cool.co.uk/assets/test_its/alevel/physics/lenzs-law/dia02.gif.

learning episode, we would see to it that the learners already had the prior knowledge that ‘opposite poles attract’, so they could be able to deduce that the bar-magnet’s N would be attracted by the coil’s *per hypothesis* S. However, this force of attraction would increase the acceleration of the bar-magnet falling into the coil; this would increase the current in the coil; the increased current would increase the field around the coil; this would cause an even greater force of attraction, and so on.

Pupils could thus see that the implications of $\sim p$ lead to an absurdity: energy from nowhere. The movement of a bar-magnet into a coil would, under the right conditions, quickly lead to large currents, intense fields, and the magnet being pulled out of one’s hand with great force. The conclusion of this *reductio ad absurdum* is that $\sim p$ cannot be the case, so p must be true. Plunging a bar-magnet into a coil in fact produces currents such that a temporary field is generated which *resists* the plunging motion. This is an instance of a more fundamental law concerning the conservation of energy, which has many manifestations (including le Chatelier’s principle in chemistry). Having shown what must rationally be the case, pupils would then check this empirically. They would also be invited to consider the effects of pulling the magnet upwards out of the coil.

The true belief, p , thus acquired has been arrived at by acting from intellectual virtue, including a consideration of the counterfactive $\sim p$; and it has been stored together with both empirical evidence that p and protection against the suggestion that $\sim p$ might be the case. The knowledge gained is of the higher type which Sosa calls ‘reflective knowledge’ (K^+), in that the learner now has an apt belief that his knowing p is defensible against pertinent sceptical doubts (although not against what we might term the ‘impertinent’ sceptical doubts of radical hypothesis h). It also perhaps has cognitive links with le Chatelier’s principle in Chemistry, homeostasis in Biology and the more general principle of the conservation of energy, in the pupil’s web of beliefs. This gives a clue as to what an epistemically-virtuous approach to teaching Lenz’s law might look like, using a reliabilist construal of ‘virtuous’. Because of the consideration – and rejection – of the counterfactive possibility, the first-hand observation of the facts of the matter (combined with interpretation and inference), and the weaving of links with the rest of his web, the learner has a well-tethered fragment of knowledge. It also ‘passes’ Nozick’s four conditions, since (1) p is true; (2) the student believes p ; (4) in a close alternative world in which p was not true, the student would not believe it

[indeed, he has entertained and ruled out this counterfactive possibility using reasoning and observation]; and (4) were p to be true, but in a close possible world, he would still believe it. The later needs some qualification, for this alternative world must be one in which the pupils had already had some experience of magnetic attraction and repulsion. Given this, the method by which the learners acquired knowledge ‘that p ’ is a good one, which uses Sosa’s epistemic faculties such as eyesight, combined with the on-board resources of the other perceptual faculties, memory and reason, guided by the teacher’s other-regarding testimony.

Now, the student has attained a superior type of true belief, of which Sosa would approve, as well as Plato:

Socrates: True opinions are a fine thing and do all sorts of good so long as they stay in their place, but they will not stay long. They run away from a man’s mind; so they are not worth much until you tether them by working out the reason. . . . Once they are tied down, they become knowledge and are stable. That is why knowledge is something more valuable than right opinion. What distinguishes one from the other is the tether.⁴³⁵

We can help learners to fasten this tether securely, but if the process is to be virtuous they must ultimately take responsibility for this epistemic action.

Conclusions of Chapter 4

Sosa’s reliabilist branch of virtue epistemology turns out to have been highly fruitful when grafted onto educational thinking: particularly when its roots in Nozick’s theory are honoured. Attributions of knowledge can rely, inter alia, upon Nozick’s conditions (3) and (4) being assertible in the case under consideration. In other words, were p not to be the case (that is, $\sim p$), it would be plausible that s would not believe it, and were p to be the case, then it would similarly be plausible that s would believe it, even if other circumstances changed. Thus ‘what-if?’ thinking is indispensable for the person carrying out a knowledge-attribution (for example, the teacher when assessing the student) and, crucially, indispensable for the epistemic agent himself (the student), if his knowledge is to be classed as Sosa’s reflective knowledge, K^+ , and not merely ‘animal’ knowledge, K . Thus counterfactual thinking and a consideration of how a small change in circumstances might affect a belief (p , but in a close possible world) is

⁴³⁵ Plato, *Meno*, 97d-98. Here, he is comparing knowledge to the fugitive statues of Dædalus.

a necessary part of virtuous knowing (or ‘virtuous true believing’, since virtue epistemology defines knowing per se in terms of epistemic virtue). Furthermore, the Levi identity – from artificial intelligence theory – provides support for this notion that $\sim p$ must be considered, because learning qua belief-revision requires the derogation of $\sim p$ and all its close associates. All three of the ways in which the counterfactive $\sim p$ ought to feature in virtuous learning on our elaborated reliabilist model have been carried out: (i) the learners were alive to the possibilities of $\sim p$ being true; (ii) if $\sim p$ or its close implications infected their webs of belief, these have been eradicated; (iii) true proposition p has been acquired with sufficient warrant to entrench it against attacks from any future weaker epistemic input suggesting that $\sim p$ might be the case.

We have thus defined knowledge in a demanding way, which opposes a naïve version promoted by village technicians. Simplistic notions which involve students learning by reliably hitting pre-ordained targets are shown to be suspect, for even on the *Feldwege* some other possibilities need to be at least entertained, if not actively followed.

Chapter 5 – Responsibilist Virtue Epistemology and Education

Introduction

In this chapter I turn to, and extend for educational purposes, Zagzebski's neo-Aristotelian version of virtue epistemology. This is rather different from Sosa's reliabilist emphasis on the 'accurate, adroit and apt'⁴³⁶ hitting of a true proposition *p*, but nevertheless it has relevance to the notion of learning as virtuous belief-revision, which I developed earlier in the context of virtue reliabilist thought (p.166). By elaborating on Zagzebski's model, we see a rich picture emerging of a socially-enwebbed epistemic agent who revises his beliefs virtuously by exercising quasi-Aristotelian intellectual virtues to bring his doxastic web into closer cognitive contact with reality.

Zagzebski's *aretaic* approach has an overall agenda of subsuming virtue epistemology under virtue ethics. Her line is attractive in a number of respects: in particular, for the prominence it gives to *phronēsis* as an indispensable part of both epistemic and moral reasoning, and so, for us, its suitability for undergirding a profession which has both intellectual and ethical ambitions. However, I feel that an alternative approach of keeping virtue epistemology apart from virtue ethics (to the extent that this is feasible) makes analysis of the acquisition of knowledge more lucid. I will thus make some attempt at such quarantining, while allowing a certain degree of interpenetration where that is justified.

Zagzebski's Definition of Knowledge

Zagzebski defines knowledge as '... a state of cognitive contact with reality arising out of acts of intellectual virtue' (*Virtues of the Mind*, p.298). This is congruent with the conception of knowledge as the outcome of learning qua virtuous belief-revision, defended in this thesis. In a much fuller way than Sosa, she names and describes a

⁴³⁶ Sosa (2007) op. cit., p.22.

number of *aretaic* virtues⁴³⁷ which allow the putative knower to attain such a state of cognitive contact with reality. For example, she lists ‘... intellectual carefulness, perseverance, humility, vigor, flexibility, courage ... open-mindedness, fair-mindedness, insightfulness ... [and] ... intellectual integrity’ in addition to ‘... the virtues opposed to wishful thinking, obtuseness and conformity’ (*VOM*, p.155). Whereas Sosa’s brand of intellectual virtue involves the use of intellectual skills *and* genetic endowments (such as the faculty of good eyesight) to achieve reliable access to the truth, Zagzebski focuses more traditionally on virtues along the lines of Aristotle’s definition: acquired excellences. [See Appendix A for a fuller listing of the Intellectual Virtues discussed by Zagzebski and Sosa]. Some of Sosa’s epistemic ‘virtues’ would not be regarded as such by Aristotle, for faculties (δύναμαι, *dunamai*) like eyesight do not seem to require habituation in the same way as excellences such as courage, as the latter explains in *Nicomachean Ethics*, 1106a18 (see p.53). We now know that there is a role for habituation in the development of normal vision, as experiments with animals brought up in visually-deprived environments show,⁴³⁸ but there is nevertheless a clear qualitative difference between the faculty of eyesight and the virtue of courage – one being the optical and physiological properties of a sensory organ, the other, a psychological disposition of a person. Zagzebski also departs from Aristotle’s analysis, however, in arguing that not only the moral virtues (such as courage) but also the intellectual virtues (such as open-mindedness) are developed by imitation, habituation, the overcoming of *akrasia*, to attain a fully-fledged disposition beyond mere continence. For Aristotle, the intellectual virtues are fostered by direct teaching, so in this regard she is out of step with him.

If Zagzebski is correct – and I think that she is – we can infer that the teacher’s role in the learner’s processes of knowledge-acquisition ought to involve giving significant attention to the development of the intellectual virtues in the learner, for it is only through such virtues that he can attain ‘cognitive contact with reality’. Even accepting Zagzebski’s reasoning that the intellectual and the moral virtues share a similar *ætiology*, though, we might feel that the former type is unlikely to be fostered simply by setting a good example and helping the learner to habituate himself to virtuously-

⁴³⁷ I recognise that this might look like a pleonasm but I use it to separate off Zagzebski’s neo-Aristotelian excellences from Sosa’s inclusion of cognitive skills and innate faculties in his notion of epistemic virtue. Neither of the terms is thus otiose.

⁴³⁸ The classic work on this is reported in Torsten Wiesel & David Hubel (1965) ‘Extent of recovery from the effects of visual deprivation in kittens’, *J. Neurophysiol*, 28, pp.1060-72.

motivated epistemic activity, as a *prologue* to supplying some stimuli for him to address virtuously. Just as I argued earlier, that one's first language and personal ontology develop side by side (p.83), so too do intellectual virtue and knowledge. The Augustinian notion that the world is in some sense already a set of 'givens' – encoded in the child's private language – and that learning the language of the natives is only a question of the 'stranger' constructing a mental table listing these givens, together with the appropriate label in the 'foreign land' into which he has been born, was, as we have seen, undermined by Wittgenstein (p.83).

Applying a similar line of reasoning to educational virtue epistemology, we see that the 'givens' of the world are not unproblematically cognized as discrete, interpretation-neutral objects and events, but are conceptualised alongside the growth of the intellectual virtues. Thus it is likely that any thought of teaching the intellectual virtues in isolation from putatively substantive knowledge – as O' Toole recommends (p.146)⁴³⁹ – can similarly be undermined, in a way paralleling Wittgenstein's argument. It is now commonplace for efforts at developing content-free critical thinking to be disparaged,⁴⁴⁰ but it is also true that teaching the substantive content in the absence of any critical thinking ought similarly to be denigrated. If Zagzebski's thesis that knowledge can only be acquired through the good offices of intellectual virtue is true, then the corollary is that intellectual virtue can only be developed in the presence of knowledge. The bootstrapping required to get this interdependent project off the ground is next analysed by considering some of the individual virtues identified by Zagzebski.

⁴³⁹ Christopher J. O'Toole (1938) 'The Teaching of Intellectual and Moral Virtues', *Ethics*, vol.49, no.1, pp.81-84, p.81.

⁴⁴⁰ Emery Hyslop-Margison, for example, makes the observation that: 'A highly-skilled airline pilot who successfully confronts instrument failure by employing alternative guidance techniques may be unable to substitute a missing minor ingredient when baking bread'. Emery J. Hyslop-Margison (2003) 'The Failure of Critical Thinking: Considering Virtue Epistemology as a Pedagogical Alternative', *Philosophy of Education*, (ed. K. Alston) (Urbana, Illinois: Philosophy of Education Society, 2004), pp.319-326, p.321. I teach an in-service course to airline pilots, entitled 'Thinking and Learning Skills', and can confirm that aeronautic critical thinking and academic critical thinking are not co-extensive. It takes much work to transfer attention from the terse commands of the control tower to the supported arguments of the ivory tower.

Cultivating Epistemic Virtue and Knowledge

Important Epistemic Virtues

I defend here a model of learning as virtuous belief-modification, carried out by an epistemic agent animated by epistemic virtue, to bring his doxastic web into closer cognitive alignment with reality via intersubjective triangulation with the webs of others. First, though, let us simplify the context by removing the putative knower from the wider epistemic community and putting him with an individual teacher. It might be thought that this stripping back to essentials could be taken even further, to consist solely of the learner in his physical environment, unencumbered by the presence of a teacher. This would be a step too far, however, for the ‘feral knower’ cannot progress much with only his own thoughts for company. Granted, the ‘other’ voice that is required for constructive dialogue about the world need not be a teacher – it could be merely a fellow seeker who is epistemically well-placed to be of use, or a book, or an internet connection – but this alternative account of reality, in whatever form it takes, is indispensable.⁴⁴¹ Without it, the epistemic agent has no resources with which to test anything but the simplest of theories about brute reality. Think of Robinson Crusoe, alone on his desert island, whose doxastic activities are limited to those needed for survival and whose enquiries consist of simple observation and trial-and-error.

Even these attempts at knowledge-acquisition are not entirely free of intersubjective influence: they are mediated through memories of words and images originating in his past life in the company of others. Arguably, no observation is truly ‘simple’ for minds like ours: what we perceive is never innocent of interpretation. For Robinson Crusoe to be a feral knower would require him to have been left on the island as a baby and to have learnt everything from scratch. Deprived of ‘teachers’ to provide him with the conceptual sophistication which comes with language, his epistemic progress would be extremely limited. We see real-life versions of this in accounts of unfortunate children kept locked away from human contact: fed, but neither linguistically nor intellectually nourished. In the early nineteenth century, for example, the German boy Kaspar Hauser became a celebrity in the years following his release from solitary captivity.⁴⁴²

⁴⁴¹ It is conceivable that this ‘other’ could be the solitary epistemic agent viewed diachronically. In other words, he might keep a reflective journal and use this to supply a different point of view on a later day when his thinking had changed.

⁴⁴² Anselm von Feuerbach (1833) *An Account of an Individual Kept in a Dungeon, Separated From All Communication With the World, From Early Childhood to About the Age of Seventeen* [Translated from

In more recent times, the discovery of the Californian ‘wild child’, Genie, provided 1970s psycholinguists with much research material as they attempted to develop her language skills. Although she did make some progress, her utterances never became more sophisticated than word-combinations rather like garbled telegram messages, and her grammar remained underdeveloped: failing to distinguish between the various pronouns, for example.⁴⁴³ Both Genie and Kaspar suffered from the lack of a ‘teacher’ in their formative years, a deprivation for which later attempts at remediation could not fully compensate. A critical period of *eukairos* had passed and a time of relative *akairos* entered.

So, if the minimum configuration for learning is a learner and a ‘teacher’,⁴⁴⁴ what are the crucial virtues required of the learner for success? One obvious candidate is Zagzebski’s ‘proper trust of authority outside [one’s] area of expertise ...’ (*VOM*, p.319). Provided that this trust is warranted, in that the teacher’s testimony is both sincere and competent, the learner may acquire knowledge. This is an archetypal teaching and learning dyad: the teacher knows certain things and makes her knowledge available to the learner via testimony. The learner recognises this testimony as trustworthy and legitimately accepts the knowledge on offer. Clearly this process, while intellectually virtuous, has its limitations. The chief one arises from the fact that the learner and teacher do not share an identical doxastic web, so the meanings they attribute to the propositions under consideration cannot match precisely. Not only would such a congruence of webs be highly improbable, given their different experiences and intellectual gifts, it would do the putative learner no good. If they did, *per impossibile*, possess precisely the same set of beliefs in the same configuration, one could not learn much from the other, just as Narcissus’ reflective practice did not advance his knowledge greatly.

There are echoes here of Meno’s paradox of learning, in that what the learner really needs (a coherent extension of his knowledge) is neither effortlessly attained, nor easily recognised when it is attained. By the same token, what he does not need (more unassimilated fragments of ‘knowledge’ which offer no threat to his existing stock) is

the German] (London: Simpkin & Marshall). Reprinted in <http://www.feralchildren.com> [online] [Accessed 19 April 2010].

⁴⁴³ Maya Pines (1997) ‘The Civilising of Genie’ in Loretta F. Kaspar (ed.) (1997) *Teaching English through the Disciplines: Psychology* (Oceanside, NY, USA: Whittier).

⁴⁴⁴ Construed widely to encompass any more knowledgeable other, text, web-site and so on.

readily available. In the absence of a one-to-one web-mapping between teacher and learner, any testimonially-derived knowledge accruing to the learner would not have the same coherence as it could be expected to have in the web of the testifier (assuming that she acquired her beliefs virtuously). Lacking other, more critical, intellectual virtues, the learner would thus expand his web by simple accretion, without addressing a number of the aporias and contradictions which result, and would thus be in the unhappy position of possessing an incoherent congeries of disconnected facts.

For the learner's web to be spun in a coherent manner, the attendant belief-revision requires a derogation of certain related propositions in the light of the addition of a new proposition p to existing belief-corpus C , if the theories of Alchourrón, Gärdenfors and Makinson are accepted.⁴⁴⁵ Accretion without derogation leads to incoherence in all but the simplest doxastic episodes. This incoherence is clearly not a desirable outcome; we wish the learner virtuously to weave a well-integrated web of true beliefs, or at least try to do so. Furthermore, we desire his web not only to possess some coherence, but also to be one which he can claim as his own: one for which he can take some credit. An uncritical stance towards the teacher-learner dyad on the part of the learner will not enable him to acquire a set of beliefs which displays both coherence and cognitive contact with reality. Moreover, simple doxastic trust is a fitting attribute during some of the learning undertaken by a tyro, but after his initial successes it is essential that he develop a range of other epistemic virtues, in keeping with his intellectual maturity and indexed to the matters in hand. The teacher-learner dyad may be *de rigueur*, both in terms of bootstrapping the process of virtuous belief-formation and in respect of sustaining it, but as *sole* doxastic mechanism it runs into dangers parallel to the well-known 'new evil demon problem'. For discussion purposes, I shall label this parallel danger 'the new Athene problem'.

The 'New Athene Problem'

The new evil demon problem refers to the possibility that an epistemic agent could proceed with due intellectual virtue (interpreted under an internalist paradigm) and still fail to reach the truth because of unpropitious circumstances. The putative knower could be open-minded, careful, properly trustful of legitimate authority outside his area

⁴⁴⁵ Alchourrón, Gärdenfors and Makinson [AGM] (1985) *op. cit.*, p.510.

of expertise, and so on, and would thus qualify as embodying the intellectual virtues. However, the environment in which he finds himself might be one in which an unvirtuous lucky-guesser succeeds in the externalist aim of acquiring true belief, while he, the intellectually-virtuous agent, fails miserably. By externalist lights, then, the lucky-guesser uses a reliable conduit to the truth *in the demon world* and thus behaves virtuously, while the agent considered (internally) to be virtuous does not use truth-conducive methods, so must be regarded (externally) as intellectually unvirtuous. This problem has led Zagzebski to treat ‘virtue’ as a success-term and to modify her internalist leanings to incorporate some externalist elements, so that for her the epistemic virtues are truth conducive. In this respect, she is agent-focused rather than agent-centred.

The world of education, however, is not generally regarded as a demon world, because teachers can usually be relied upon to be epistemically sincere and competent. As a profession, we are concerned for the progress of our students and do not knowingly mislead them, by and large,⁴⁴⁶ so if they accept our testimony they *can* acquire knowledge (apart from those occasions when we are sincerely mistaken). However, such solicitude can divert the novice epistemic agents in our classes from their long-term intellectual aim of acquiring true beliefs, understanding and wisdom. The learner can be over-protected.

Sosa, in explaining the difference between his technical terms ‘safety’ and ‘aptness’, talks of a safe archery shot which is nevertheless not apt, for: ‘A guardian angel with a wind machine could guarantee the safety of a shot even when it is inapt.’⁴⁴⁷ We recall that an accurate shot is Sosa’s metaphor for the acquisition of a true belief, and he intends ‘aptness’ to signify that the belief has been acquired *because of* the ‘adroitness’ of the believer. Clearly, in this scenario, the believer is not to be credited with a virtuous act of believing, since (despite its success) it did not follow from his own epistemic skill but from the conditions being artificially made propitious by angelic intervention.

⁴⁴⁶ Except on those occasions when we do so for what we take to be their long-range epistemic, pedagogical or prudential good.

⁴⁴⁷ Ernest Sosa (2009) ‘Precis of A Virtue Epistemology’, *Philosophical Studies*, 144, p.108.

This is what I have termed the ‘new Athene problem’: by acting with epistemic beneficence, teachers guarantee that learners acquire ‘safe’ beliefs, but the more effective these pedagogical interventions are, the less ‘apt’ are the true beliefs so acquired. The student recipients of excessive pedagogical beneficence are not in a demon world in which intellectual virtue fails to be truth conducive, but rather in one governed by Athene, who deflects the epistemic arrow of her charges to reach the truth irrespective of their lack, or otherwise, of intellectual virtue. In this environment, there is no need to develop the critical virtues, for doing so would only take extra effort, with no increase in the acquisition of true beliefs. Indeed, a habit of critique rather than acquiescence in these surroundings would make the learners less efficient as doxastic agents and might even lead them to form some false beliefs and wrongly take those to be knowledge. Under a technicist paradigm, the teacher is right to steer the arrow: to do whatever it takes to ensure that the learner reaches the desired outcome of acquiring the approved proposition as efficiently as possible. The learner too is right to accept this guidance without demur, in the interests of a smooth transfer of ‘knowledge’. He will score highly at hitting the targets in the rigged game that village technicism encourages. Under a virtue epistemic paradigm, however, these actions can – under some circumstances – be seen as vicious, for the ‘knowledge’-acquisition has not been governed by the learner’s epistemic virtue. Whether we view the teacher’s actions as vicious, or as unvirtuous-because-misguided, depends on her intentions. If these relate solely to enhancing her examination statistics, irrespective of any genuine learning on the part of her students, the former judgement may be reached; but if her heart is in the right place and she is only being over-protective, the latter would apply. If the pedagogical ends had ostensibly been achieved, but the means were suspect, the outcome might only be an ersatz type of ‘knowledge’ and not the real thing. Next, I provide some further detail for this claim, with a brief reference to Athene’s role in *The Odyssey*, before going on to suggest a solution to the problem by contrasting two sorts of aim: *telos* and *skopos*.

King Odysseus of Ithaca charged Mentor (the goddess Athene in human guise) with the task of looking after his son, Telemachus, during his extended absence, fighting in, and returning eventfully from, the Trojan wars.⁴⁴⁸ Mentor did not do a particularly good job of ‘keeping all safe’ during the king’s absence, however, so it is tempting to examine the narrative for clues as to how Telemachus could have had an easier time of it, given

⁴⁴⁸ Homer, op. cit., p.23 § 225.

Mentor/Athene's supernatural abilities. This would be to miss the point, though. Were Telemachus to have been spared 'traversing the barren sea',⁴⁴⁹ he would not have learnt the things he did: valuable knowledge which could not always be encoded into straightforward propositional form; knowledge which had to be authentically lived. Had Athene removed her mask and used her magical capabilities to disclose the whereabouts of Telemachus' father, for instance, or provided some strategic advice about the battles he faced, the instant gratification experienced by Telemachus would have no doubt been welcome, but in the long run would have been pedagogically unsound.⁴⁵⁰ In addition to missing out on valuable learning experiences, and the knowledge – propositional and otherwise – which came from these, Telemachus would have had little opportunity to develop his own epistemic virtues, had an over-protective Athene used her divine powers simply to give him the knowledge he sought, by straightforward testimonial means. We see a more prosaic re-statement of this principle in Rousseau's *Emile*, in the vignette of the broken window.

He breaks the windows of his room; let the wind blow upon him night and day, and do not be afraid of his catching cold; it is better to catch cold than to be reckless.⁴⁵¹

Environmental feedback from brute reality sometimes provides a learning experience of greater vividness – in this case about actions and consequences – than the teacher can supply. By breaking a window and consequently feeling the cold, Emile learns a more valuable lesson than could have been provided by a highly interventionist instructor.

Telos and Skopos: Different Ways of Viewing Success

Mortal teachers have neither the distant perspective from Mount Olympus, nor Rousseau's class of one individual, to enable the long-term epistemic flourishing of students to be reliably predicted and advanced. Because of this, there can be a tendency to focus on short-term epistemic goals. This pedagogical myopia leads to a concentration, at best, on the zone of proximal development (to borrow Lev Vygotsky's term), with a blind-spot where a consideration of the student's zone of distal

⁴⁴⁹ *ibid.*

⁴⁵⁰ Brenda Whitney speculates amusingly about what the student Telemachus might write on his end-of-course evaluation form. She suggests that this might be a complaint about his struggles to learn what Athene, with her divine powers, could have simply told him. Brenda Whitney (2004) 'Mentors: benevolent fools or goddesses of power?' *Critical Quarterly*, vol.46, no.3.

⁴⁵¹ Jean-Jacques Rousseau (1762) *Emile* [tr. Barbara Foxley] Project Gutenberg eBook.

development might be. In paying inordinate attention to the immediate goals – the *skopoi* – we sometimes sacrifice the development of long-term, stable, epistemic dispositions in our students. This short-termist tendency has infected other areas of intellectual life too. For example, many scientists are expressing unease at having to write at length about ‘impact’ on funding applications, since the practical uses of their work may not emerge for thirty years or more.⁴⁵² Likewise, our pedagogical work may not bear fruit for decades. Ironically, the more pedagogically ‘skilful’ we become (defined in terms of ensuring our students’ success in attaining the *immediate* learning outcomes), the less likely it may be that our students will approach the *telos* of becoming epistemically virtuous.

In discussing the virtues generally, rather than only those pertinent to education, Julia Annas advocates the Stoic analysis, in which the success of an action is indexed to how it contributes to achieving the overall goal – the *telos* – rather than whether or not it hits the immediate target – the *skopos*. It is in achieving the former that the action is to be classed as a success – a *katorthoma*.⁴⁵³ It can be seen that this point of view represents a major divergence from the pervasive technicist vision of the present day, which regards effective education as the efficient hitting of pre-determined learning targets. To evaluate the epistemic agents under an alternative, virtuous rubric, it would not be the immediate consequences for the learner we would examine, but their long-term virtuous motivation and his continued engagement with knowledge.

This is not to elevate merely good intentions as the sole measure of achievement, however. As we saw earlier, Zagzebski defines ‘virtue’ as a success term (p.202), and in this particular respect, Annas too aligns her view with Aristotle’s notion of the virtuous person as successful (*katorthotikos*) and also with ‘the Stoics, who call a virtuous action as performed by a virtuous person a success (*katorthoma*)’.⁴⁵⁴ We note that ‘successful’ learning by itself is not enough: there are also both Stoic and Aristotelian requirements that the learner be sincerely motivated. So as well as defining virtue as a success term, we might also define ‘success’ as a virtue term. If, on the other hand, education is seen as just a short-term rite of passage, a successful transit

⁴⁵² Geoff Watts, *Moments of Genius*, BBC Radio 4, 12 Dec 2010, 13.30.

⁴⁵³ Julia Annas (2003) ‘The structure of virtue’ in Michael DePaul & Linda Zagzebski (eds.) (2003) *Intellectual Virtue: Perspectives from Ethics and Epistemology* (Oxford: Oxford University Press), p.25.

⁴⁵⁴ Annas (2003) op. cit., p.23.

through which will lead the passenger to material success, then pleas for a lifelong sincere motivation towards authentic learning sound like baseless pieties.

***Halbbildung* and *Bildung*: Counterfeit and Genuine Learning**

Peter Sloterdijk suggests that anything that makes no obvious contribution to their future prospects in the employment market causes ‘a priori stupefaction’⁴⁵⁵ amongst pupils. We might add that once education is associated too exclusively with the economic and social value of qualifications, the danger emerges of the individual making no genuine attempt to engage with the ideas being met, but only cynically collecting them for personal advantage. Friedrich Nietzsche calls this scheming individual the *Bildungsphilister* (‘educated Philistine’) ⁴⁵⁶ and Theodor Adorno develops this notion further, using the term *Halbbildung* (‘half-*bildung*’ or ‘pseudo-education’) ⁴⁵⁷ to denote education construed by the individual as a set of investment strategies which buy advantage in the social hierarchy but do nothing to change his perspectives. Christopher Middleton writes of Nietzsche’s notion of *Bildungsphilister* as: “‘Culture-Philistine’ – a central concept in N’s [sic] analysis of culture as an incrustation over a vacuum’.⁴⁵⁸ For Adorno, this ‘incrustation’ is not a harmless decoration, for he:

... claims that the half-education dispensed to the masses by educational institutions hinders the emancipation of the individual whilst simultaneously severing ties to tradition. *Halbbildung* acts as an agent of conformity, and although it promises the expansion of the mind through education, it does not fulfil its promise, leaving the individual in a state of limbo between enlightenment and myth. ... *Halbbildung* is bound to the principle of exchange and is an integral part of the web of bourgeois delusion: it is a state in which the spirit has been taken hostage by the fetish character of the commodity. Indeed, *Bildung* itself becomes a both a commodity and a financial investment into the financial future of the individual. ... [However] Adorno could not have foreseen the extent to which institutions of higher learning have been forced in the last decades to bow to the pressures of the market place.⁴⁵⁹

These are strong words, but they alert us to some of the dangers of unvirtuous educational practices. A striking recent example I saw that illustrates this phenomenon was on the Luas (tram) in Dublin. A student sitting nearby was completing an exercise

⁴⁵⁵ Peter Sloterdijk (1987) *Critique of Cynical Reason* (Minneapolis: University of Minnesota Press), p.xxix in David E. Cooper ‘Postmodernism’ in Randall Curren (ed.) (2003) *A Companion to the Philosophy of Education* (Oxford: Blackwell), p.207.

⁴⁵⁶ In a letter to Georg Brandes, Nietzsche (Feb 19, 1888) claims that ‘The word I coined, “Bildungsphilister”, survived the raging fluctuations of the polemics and has entered everyday language’. From: Christopher Middleton (ed. & tr.) (1996) *Selected Letters of Friedrich Nietzsche* (Indianapolis: Hackett) pp.285-286.

⁴⁵⁷ Karen Bauer (1999) *Adorno’s Nietzschean Narratives* (Albany, NY: SUNY), pp.176-177.

⁴⁵⁸ Middleton (1996) op. cit., Footnote 135, p.287.

⁴⁵⁹ Bauer (1999) op. cit., p.176.

in the writing of four-part harmony, while wearing headphones from which loud, aggressive music was spilling. So intrigued was I by this apparent alienation of the student from her own learning that I struck up a conversation with her. After realising that someone was speaking to her, and taking off her headphones, she confirmed that she was indeed working on a piece of four-part harmony and that the music she was listening to bore no relationship to the music she was writing. To arrange harmonies well involves the cultivation of an ‘inner ear’, such that the composer can ‘hear’ what is being written – an almost impossible task while listening to something unrelated. But it *is* possible to treat the writing of four-part harmony (a standard component of the formation of a musician) as an externally-imposed technical exercise, and to carry it out algorithmically using prescribed rules. By mechanically applying a set of principles – such as organising contrary motion between the melody and bass, and avoiding consecutive fifths – a passable attempt can be made at harmonic writing. The student may then indeed ‘pass’ this part of the course, but in a ‘schizophrenic’,⁴⁶⁰ alienated way, for she has not heard internally the sound of that which she claims to be her own composition. In terms of observable outcomes, all seems to be well – and her final qualification may well buy advantage in the world – but clearly all is not well when viewed through the lens of virtue theory.

There is plainly something vicious about *Halbbildung* and its product, the *Bildungsphilister*, so we might ask how *Bildung* can be reclaimed as part of virtue epistemology. The underlying notion of *Bildung* derives neither from Aristotelian nor from Stoic conceptions of epistemic virtue, but from the Romantics of the late eighteenth century (including Hegel, Schlegel, Schelling and Schliermacher) who saw the highest good as self-realization through individual metamorphosis. Nevertheless, all three construals (Aristotelian, Stoic and Romantic) have in common some degree of open-endedness about the outcome of the learning journey. The *telos* of Aristotelian virtue is not consequentialist in the sense of arriving at pre-determined ends, and neither can the Romantic ideal of the individual making his own destiny be so characterised. Nevertheless, they both embody a notion of flourishing: the Aristotelian conception being along lines determined by our nature as human beings and the Romantic version being towards an apotheosis of the individual, edified by culture. In both varieties, a striving for self-improvement is an indispensable feature of the definition.

⁴⁶⁰ Again, I intend here Michael Stocker’s use of this term, and not the medical version.

However, motivations are not always clear, even to the subjects themselves, and it is likely that all but the most highly-principled learners will oscillate between *Bildung* and *Halbbildung* and not be quite sure which path they are on at any given time. In the present climate of unsophisticated accountability,⁴⁶¹ teachers may easily succumb to the temptation to inflict *Halbbildung* on learners rather than assist them in their *Bildung*. Faced with pressing external imperatives, the teacher's sole aim may be to drive pupils towards high examination grades, whatever that takes. If, however, it is suspected that there is more to education than that which can easily be measured, the notion of *Bildung*, in common with virtue epistemology, invites a consideration of how students' learning experiences can contribute to their intellectual flourishing.⁴⁶² Instead of focussing narrowly on short-term *skopic* targets for the perceived present and predicted future needs of business and industry, it might be better to think in terms of an individual's life-long learning, of which schooling is only a part.

There was a literary genre in the late eighteenth / nineteenth century, the *Bildungsroman*, a novel which sets out the adventures of a young protagonist and the learning which results therefrom. One famous example of this is Friedrich Schiller's (1804) *William Tell* (a story which describes an interesting variant on target-setting). Another is Johann Wolfgang von Goethe's *Wilhelm Meister's Apprenticeship* (1775), in which the hero, by means of travel and encounters with a wide variety of people, achieves personal growth and self-fulfilment – a life of 'flourishing', we might say:

"I know not the worth of a kingdom", answered Wilhelm; "but I know I have attained a happiness which I have not deserved, and which I would not change with anything in life."

James Joyce's *A Portrait of the Artist as a Young Man* (1915) also belongs in this category. The *Bildungsroman* may provide us with a more nuanced, less short-sighted account of our part in the learning trajectories of our students. We are the characters who influence present-day Wilhelm Meisters or William Tells during the time that our

⁴⁶¹ It might look intricate, and have *statistical* sophistication (involving perhaps such techniques as 'residual analysis') but the notion of accountability within a narrow technicist framework is an impoverished and unsophisticated one. As Pádraig Hogan notes, 'The chief remedy [for alleged underperformance] lies in restricting the discretion previously enjoyed by such persons or parties and in making them strictly accountable for outcomes that can readily be measured and compared to those achieved by other schools in an open competition for grades, pupils and resources.' Pádraig Hogan (2000) 'Virtue, Vice and Vacancy in Educational Policy and Practice, *British Journal of Education Studies*, vol.8, no.4, pp.371-390, p.372

⁴⁶² I develop this theme at greater length in Seán Moran (2007) 'What is science education for?', *School Science Review*, 89, 326, pp.97-102.

paths cross. Attractive as this notion of learning as a journey is, though, we are not merely fellow wanderers who randomly engage with learners at a particular way-point in their expeditions, but epistemic and moral agents with a particular role and its attendant responsibilities. Swallowing the *Bildung* notion may be a cure for pedagogical myopia, but the emphasis on the learners' *teloi* could well have the consequence that the *skopoi* are neglected. To continue the ophthalmic metaphor, we might describe this as pedagogical hypermetropia.

Such uncorrected long-sightedness could be seen as a culpable flaw in a teacher, for it prevents us from seeing the more immediate features of the pedagogical setting which require attention. It is tempting to take an Aristotelian line on this dichotomy and suggest that there may be a happy medium between the excess of converging power that causes myopia and the deficit of converging power which leads to hypermetropia, but this mean would not in my view represent a virtuous compromise. There are times when the long view is the most useful perspective for the teacher to take on learning and other times when more detailed, close-up features need to be seen with acuity. A certain nimbleness is required to be able to switch between the two ranges, so it is presbyopia which is the impairment to be ameliorated. Such an inability to accommodate one's view to that which the situation demands is likely to lead to pedagogical action which is less than admirable, for it is based on an unvirtuous appraisal of the context, corresponding either to short-sightedness or to long-sightedness.⁴⁶³

Virtuous Responses to Aporias

One crucial difference between teacherly practice which tends towards *Bildung* and that which leads to *Halbbildung* is how the teacher responds to the learner who has reached an aporia by holding propositions both that *p* AND that $\sim p$. His having seemingly paradoxical 'epistemic property rights' to such a pair of impossible propositions arises because the rights in question flow from two different origins – one externalist in nature and the other internalist. The externalist view is that 'if one relies on what is, in point of fact a (sufficiently) reliable process, one is entitled (hence, has

⁴⁶³ Myopia is shortsightedness; hypermetropia is longsightedness; presbyopia is an inability to accommodate the lens of the eye to different distances.

the right) to accept its deliverances'.⁴⁶⁴ Against this, according to Fred Dretske, is the internalist stance that one is 'justified in rejecting [these same deliverances]'. This justified rejection originates in reasons to be found in the 'cognitive repertoire'⁴⁶⁵ of the agent.

We see this clash of rights most clearly in the classroom situation in which the learner is entitled to accept the propositional deliverances of the teacher (who is 'delivering the curriculum', perhaps) while simultaneously rejecting these same propositions for reasons manifest in his own cognitive repertoire. If the teacher is in point of fact reliable in giving testimony about matters such as *p* (whether the student knows this or not) then he is entitled to accept and own *p* on the strength of her testimony, while simultaneously holding belief $\sim p$ on the basis of his own internally-available misgivings about *p*. My earlier account of a pupil coming to believe BOTH that for a pendulum there is a relationship between period, *T*, and angle, θ , AND that there is no such relationship, is a case in point (p.177). This seems to me to be an unstable position. The learner needs to come down on one side or the other to restore epistemic equilibrium, for if he does not, he is on the road to becoming a *Bildungsphilister*. Even if he does come down on the correct side, this could still be for non-epistemic reasons and hence intellectually remiss:

She might have prudential or religious reasons for accepting *P* as true (e.g., he will skin me alive if I don't believe it) that are quite independent of the truth of *P*. If these reasons are strong enough, they might give one a right – religious or prudential as the case may [sic] – to believe.⁴⁶⁶

Although these cannot be considered as *epistemic* entitlements, they still seem to have some purchase in the learning situation. Reasons for holding particular beliefs which are purely (say) prudential⁴⁶⁷ do not display epistemic virtue, but the learner who holds these beliefs may nevertheless be seen as being entitled to them, if we follow through Dretske's analysis to the educational context. So, on this account, a learner believing something for examination purposes only, without incorporating it into his web of beliefs, is acting within his rights. If we are to maintain a virtue-epistemic orientation however, the absence of *intellectual* rights to the proposition in question disbars the

⁴⁶⁴ Fred Dretske (2000) 'Entitlement: Epistemic Rights Without Epistemic Duties?' *Philosophy and Phenomenological Research*, vol.LX, no.3, pp.591-606, p.595.

⁴⁶⁵ By this, I take it that Dretske means that the reasons are accessible to the agent.

⁴⁶⁶ Dretske (2000) op. cit., p.594.

⁴⁶⁷ In the sense of self-serving; in this case, prompted not by love of learning but by fear of failure.

putative knower from such a property claim.⁴⁶⁸ Here we might take issue with Dretske and deny his assertion that the learner's doxastic performance in this prudentially-motivated scenario is a rightful one (or an 'apt' one, in Sosa's sense) and thus characterise it instead as 'inapt': an occasion of *Halbbildung*. I earlier described such apparent learning as 'Vicious Acceptance' (p.115). In the absence of either *epistemic* entitlement or justification, a prudential claim will not do, since we are seeking an attribution of *knowledge* and by its very nature this is an epistemic matter.

To return to the pendulum scenario. The gap between what actually connects the agent's belief to the truth (the externalist right to believe; an epistemic property right that does not fall into abeyance through ignorance of this right) and what seems to him to be a justified belief (but which in point of fact is flawed) gives rise to the (p AND $\sim p$) aporia. The learner is virtuously holding a falsehood, which he maintains in parallel with the true proposition offered by the teacher, for prudential reasons. If the learner ignores this aporia and treats 'school-knowledge' and 'personal-knowledge' as domains which need not intersect, he is, as we have seen, undergoing the process of *Halbbildung*. In order to avoid contributing to this pseudo-edification, the teacher ought to have regard both to her own beliefs and to the need to demonstrate open-mindedness in respecting the student's viewpoint. This latter is not to take a relativist position, but to recognise the necessity of addressing the learner's $\sim p$ as a prelude to his virtuous acquisition of p . Now, the possibility arises for the student to entertain, and perhaps assent to, true proposition p , for *epistemic* and not merely prudential reasons. He can regard the teacher's testimony, "that p ", as an epistemic source or invitation, and not just an implied instruction: "It is in your interests to assent to my assertion 'that p '".

Ultimately, entitlements to knowledge rest on trust. As we saw earlier, in a discussion of testimony (p.85), the default position is that we accept the deliverances of testimony at face value, unless there is reason to think otherwise – an example of Zagzebski's virtue of 'proper trust of authority outside [one's] area of expertise ...' (*VOM*, p.319). Even if there is a discrepancy, the student ought to make the attempt to ameliorate it:

⁴⁶⁸ This is not of course a legal construal of intellectual property rights: the learner need not have developed the beliefs in question, but he ought to have engaged with them virtuously.

We must apply a principle of charity (or some similar interpretive maxim) in interpreting the speech of others ... so that agreement is maximized or optimized amongst us and them. We must, that is, find their expressed beliefs mostly correct by our lights.⁴⁶⁹

As teachers, we should try to ‘think alongside’ our students to see why they believe that $\sim p$, when p is in fact the case (so we, from our better-informed, more authoritative, position, believe). This willingness to entertain an opposing point of view may even on occasion cause us to revise our own belief-set. Although this temporary role-exchange may happen more frequently at third or fourth level, it is still important for pedagogical purposes at all levels of education that the learners’ viewpoints are honoured, unless we claim omniscience. As John Stuart Mill famously puts it:

To refuse a hearing to an opinion because they are sure that it is false is to assume that *their* certainty is the same as *absolute* certainty. All silencing of discussion is an assumption of infallibility.⁴⁷⁰

Mill goes beyond merely arguing for what we might term ‘epistemic humility’, however. He feels that the clash of opposing opinions is vital for learning, for, ‘Both teachers and learners go to sleep at their post as soon as there is no enemy in the field’.⁴⁷¹ He berates the person who contents himself with ‘cram’ and, in a gesture to the scholastic disputations of mediæval times, recommends that ‘... if opponents of all-important truths do not exist, it is indispensable to imagine them and supply them with the strongest arguments which the most skilful devil’s advocate can conjure up’.⁴⁷² This last injunction applies only to ‘moral and human’ topics. Moreover, such disputation is aimed at ‘real understanding’ rather than knowledge simpliciter, so we ought not to take Mill’s prescription to apply in every case of teaching and learning. Notwithstanding the dangers of sleeping at the post in the absence of disputation, it would also become tiresome to put every proposition p to the test by pitting it against $\sim p$. Furthermore, this can create the illusion that p and $\sim p$ are worthy adversaries, even when they are not. We sometimes see examples of this phenomenon in the epistemic activities of the mass media.

For instance, former UK Ambassador to the United Nations Sir Crispin Tickell berates BBC environmental analyst Roger Harrabin for the BBC’s policy of ‘balance’ over

⁴⁶⁹ Coady (1992) op. cit., p.157. Here he is summing up some of Donald Davidson’s thoughts on the matter, drawn from a number of works, both earlier and later.

⁴⁷⁰ John Stuart Mill (1859) *On Liberty* (London: Penguin Books Ltd., 1974) p.77 [Italics in original]

⁴⁷¹ Mill (1859) op. cit., p.105.

⁴⁷² Mill (1859) op. cit., p.99.

issues such as climate change.⁴⁷³ The BBC, claims Tickell, were “guilty” of inappropriate even-handedness, since “97%” of scientists accepted theories of climate change, while a mere “3%” did not. The reporting of minority contrarian views thus distorts audience perceptions, since providing equal air-time in the interests of balance implies an unfounded parity of esteem. Even if the riposte to the eccentric view during these interviews is robust, the allocation of a time-allowance for p and $\sim p$ as if their credibility-ratio was 50:50 gives the eccentric view undue prominence, and may have the effect of injudiciously promoting the testimony of those with what Locke calls ‘an interest’:⁴⁷⁴ the fossil fuel industry in this case, according to Tickell.

In more extreme cases, the two sides might not even share the same fundamental paradigm. I have met this phenomenon while teaching science in Belfast, when some students refused to acknowledge generally-accepted Uranium-235 half-life evidence for the age of the Earth, since this clashes with the pronouncement of Archbishop Ussher of Armagh that the Earth was formed in 4004 BC, as indicated by his analysis of biblical genealogies. The scientific paradigm is thus rejected by a student of A-level physics, who claims that God has tweaked radioactive decay curves and put fossils into position to test our faith.⁴⁷⁵ As a teacher, one *could* engage in a debate at this point or, for the sake of pedagogical pace (and peace), suggest that the two versions are merely different narratives and as long as each is confined to its own domain they need not clash. Thus, in a science examination, it would be prudent to use scientific theory rather than biblical exegesis to answer scientific questions. One experiences some disquiet in taking this way out, however, and the feeling that endorsing such a lack of intellectual integration is an occasion of *Halbbildung*. Indeed A.C. Grayling, in a live discussion immediately following Martin Rees’ 2010 Reith Lecture,⁴⁷⁶ asserts that in such cases, “One can’t really stand on the sidelines”. He goes on: “[Whilst] one always applauds people who are conciliatory and eirenic as you are in these matters, surely there is a line that can’t be crossed there.” Rees concedes that he, in common with other astronomers, would draw the line at creationism, and I take it that he has in mind such naïve variants as Ussher’s.

⁴⁷³ Roger Harrabin (2010) *Uncertain Climate*, Mon 30 Aug 2010, 21:30, BBC Radio 4, 198m, Long Wave.

⁴⁷⁴ Locke, *Essay*, bk.IV, ch.XVI, §11.

⁴⁷⁵ I discuss this in Seán Moran (2007) *op. cit.*, pp.97-102.

⁴⁷⁶ Martin Rees (2010) ‘What we’ll never know’, *Reith Lecture*, BBC Radio 4, 198m Long Wave, 15 June 2010.

On the other hand, doxastic coherence and integration are not absolute requirements, and we can accommodate scientific and pre-scientific beliefs quite comfortably even when they might seem to clash. After learning about the heliocentric solar system, for example, we all continue to use the terms ‘sunset’ and ‘sunrise’, for there is no need to exorcise these misconceptions and insist pedantically on ‘earthspin’ instead. The virtuous teacher can thus exercise some *phronēsis* in deciding which alternative frameworks to challenge and which to leave alone. If she does decide to challenge the students, by direct or extended testimony, there is always the possibility of an epiphany and what we might term a ‘recantation’. I remember a pupil who suddenly realised, while we were watching and discussing a video about the solar system, that the blue sky above us is not solid, so she blurted out this revelation excitedly to the rest of the class. This could not have been the first time that she had seen footage of the Earth from space, but it suddenly made sense to her in the context of our classroom dialogue. To their credit, her classmates refrained from any mockery.

Palinodes: Statements of Belief-Change

The notion of recanting is vividly illustrated in Plato’s *Phædrus*, in the form of a palinode.⁴⁷⁷ The dramatic vignette, depicting an episode of belief-revision, involves Socrates acting on a warning from his *daimonion* that harm will befall him if he does not recant and make atonement for his earlier blasphemous speech about Eros. Socrates is accused of making both factual and religious transgressions. Both errors, as we remember Murdoch pointing out (p.44), can be taken as examples of *hamartano* (which means, inter alia, to ‘make a mistake, or ... do wrong or sin’).⁴⁷⁸ In recanting and repenting of both types of ‘error’ we acknowledge our former separation from, and assert a closer connection with, the truth or the good. In overseeing this belief-revision, the teacher’s role could well be one guided by *sungnōmē*, one meaning of which is ‘sympathetic judgement’, and another is ‘pardon’.

We ought not to overplay the sin/pardon aspect of this analysis, though. Socrates’ sometimes brutal *elenetic* approach to dialogue often leads to his interlocutor experiencing the public embarrassment of being wrong (the etymology of ‘elenchus’ deriving from ‘shame’, as we recall [p.70]) and this is not something we ought

⁴⁷⁷ The etymology of the word is instructive: ‘*Palin*’ means ‘again’ (as in palindrome) and an ‘ode’ is a song or lyrical verse. So giving a palinode, like recanting, involves ‘singing again’.

⁴⁷⁸ Iris Murdoch (1992) *Metaphysics as a Guide to Morals* (London: Penguin) p.99.

routinely to inflict on the learner in typical contexts. Nor ought the recanting be solely to avoid the threat of dire consequences, for this will encourage a prudential rather than an epistemic basis for professing beliefs, and he is once more on the road to *Halbbildung*. Socrates' high-mindedness would not allow him to recant purely for prudential purposes, as the manner of his death attests, so in *Phaedrus* the *daimonion*'s warning only acts as a spur to finding genuine *epistemic* reasons for his change of heart. We cannot always rely on learners to be so principled, however (particularly in systems which foster habits of compliance), so the danger of elenchus being followed by only *apparent* recanting is significant.

Virtue Contextualism and the Teacher's Role

If the notion that the job of the teacher is to shame her students into compliance is largely rejected, for the reasons just given, then we need to suggest what can replace this role-description. This will still largely involve helping the student to learn, of course, rather than just engaging in a free-flowing dialogue. The learner may occasionally act in such a way as to alleviate his *teacher's* epistemic predicament – for example, by giving advice on how to set up a *FaceBook* account – but this is not usually seen as a central aim of formal education. It is normally the teacher who exhibits concern for the epistemic well-being of her pupils, not vice versa. In the *FaceBook* scenario, the *teacher* (rather than the pupil) is exhibiting the virtue of 'proper trust of authority outside [one's] area of expertise ...' (*VOM*, p.319), but given the standard asymmetries of the classroom, this is commonly seen as a pupil-virtue. These considerations lead to a conjecture that the social roles of the epistemic agents involved will play a large part in determining the context for virtuous intellectual activity.

Sarah Wright has developed a type of methodological contextualism which she calls 'virtue contextualism'⁴⁷⁹ and which I next apply to teachers and learners. Her methodological contextualism asserts that what she terms our 'interests' determine the parameters of what can legitimately be asked. For example, when 'doing history', questions about the authenticity of a document are perfectly acceptable, but musing on the possibility of Bertrand Russell's sceptical hypothesis 'that the world was created

⁴⁷⁹ Sarah Wright (2010) 'Virtues, Social Roles and Contextualism', *Metaphilosophy*, vol.42, nos.1-2, pp.95-114.

five minutes ago'⁴⁸⁰ being true is not. This is not a legitimate question for a historian to entertain professionally, even in his most radical moments, for if he asks it he is no longer doing history. Given the difficulties of foundationalism, one has to begin with some basic assumptions and these will be determined by the particular methodological context in play. To Wright's history example, one might add the unexamined starting point of theology that God exists, and the assumptions of educational theory that not only does knowledge exist, but students can also be helped to acquire it.

Wright's methodological contextualism is more stable than other forms of contextualism (for example, her 'attributor contextualism') but it is not completely unaffected by changes in 'conversation'. Wright gives the perspicuous example of the court, with its clear-cut rules of evidence and admissibility, accepting without cross-examination the word of someone running into the courtroom and shouting, "Fire!" The epistemic methodology has changed: the game is no longer one of a sober weighing of legal evidence to evaluate how well it matches up to the standard of 'beyond reasonable doubt', but is rather an instant assessing of a threat to personal safety. We also see what might be termed a 'methodological switch' such as this happening in the classroom context. What begins as an emulation of scientific methods, with the tyro investigators acting as young scientists, changes to one of passive acquiescence when the teacher puts a stop to the pupils' conjectures and their experimental refutations and announces the 'Correct Answer', which they should learn for the examination. Judgements concerning whether or not the teacher was right to switch the epistemic rules of engagement in this way are themselves matters for epistemology: in particular, I suggest, they are concerns of other-regarding virtue epistemology.

That this sort of manoeuvre frequently happens in classes does not give it normative force: we cannot derive an 'ought' from an 'is'. Under a prudential remit, the teacher is entitled to make the switch, and the pupils are entitled to accept its deliverances for the sake of examination success. But, in virtue-epistemic terms, such an action might be regarded as vicious, robbing the learners of both the entitlement and the justification for accepting the 'Correct Answer'. Our analysis need not be so stark, however. If the teacher has acted not with *phronēsis* but merely with cleverness (Aristotle's

⁴⁸⁰ Wright (2010) op. cit., p.103.

*deinotēs*⁴⁸¹), then she can be judged negatively from a virtue-epistemic perspective for aiming at her learning target only if, in Aristotle's phrase, 'the mark be bad', in which case 'the cleverness is mere smartness'. On the other hand, 'if the mark be noble, the cleverness is laudable'.⁴⁸² So what would constitute an epistemic 'noble mark' in this case? This might arise from the teacher's realisation that the learners were unlikely to arrive at the target knowledge in a timely way, given their pre-existing epistemic webs and their stumbling doxastic efforts. She ought, however, to make some extrapolation from the empirical evidence which members of the class had amassed, to show that the proposition she offered was at least plausible. If doxastic bridges are built between at least some of the learners' investigations and the putative knowledge being put forward, then the announcement of the 'Correct Answer' would not be epistemically vicious. On the other hand, merely dismissing cynically the empirical enquiries of the pupils and over-riding them with 'approved knowledge' would be epistemically vicious, since it both offends against testimonial justice and paints a picture of science as being not a mode of rational investigation, but rather a habit of acquiescence with authority. That teachers are often put in the position of simply depositing information into passive students (to use Friere's 'banking' metaphor) is something of an indictment of the present system for its encouragement of epistemic vice and its marginalising of virtue.

More sensitive teachers, on short-circuiting enquiry in this way, would feel a twinge of psychic distress at their lack of other-regarding epistemic virtue, while others might not even recognise their actions as vicious, since on skopic prudential grounds they could be seen as admirable. We might suggest that the fault lies with assessment schemes, and that these should be tightened up to make sure that the student really did know 'that *p*'. However, this would only lead to a sort of examination 'arms-race' in which examiners would devise ever more sophisticated ways of determining the candidates' knowing, or otherwise, 'that *p*', while some cynical teachers and strategic learners would respond by adopting increasingly tortuous techniques for showing that they did apparently know 'that *p*', without going to the trouble of engaging with it in any deep way. The loser in such a process would be the learner who wanted sincerely to engage with the knowledge, to explore it and test it and make it his own. This could well be a less efficient and effective strategy than simply finding out what the examiner wanted

⁴⁸¹ Aristotle, *Nicomachean Ethics*, bk.VI, 1144a, 24-29.

⁴⁸² Aristotle, *NE*, bk.VI, 1144a, 24-29.

and giving it to her. So the methodological context here includes the examination hall, and even the thought of the examination hall, and powerfully encourages the learner to do what would be considered epistemically vicious in other contexts. Examination methods need not inevitably be vicious, but some undoubtedly are.

Wright's modification of methodological contextualism to embrace the role of virtue – giving rise to the hybrid 'virtue contextualism' – has something to offer when analysing the epistemic virtues suitable for teaching and learning. She asks us to consider the case of a 'passive follower of a cult leader'.⁴⁸³ To be a 'good' cult follower is not good simpliciter, she argues, because the doxastic practices which are regarded highly by the cult – such as 'ignoring doubts from others and even doubting one's own experiences'⁴⁸⁴ – are not compatible with a good epistemic life. This analysis is congruent with my earlier description of the 'new Athene problem' (p.203) with the difference that the teacher's intentions are probably more benign than the cult leader's. Even so, the 'good' (that is, highly receptive) pupil may not be good simpliciter, for he too is acting in ways not compatible with a good epistemic life and is becoming habituated to a passive credulity.

The upshot of these discussions is that in considering the epistemic virtues in the context of education, we ought not reduce the teacher's role in promoting the learner's epistemic well-being to one of sincere and competent testimony to a passive recipient, for examination purposes, even though this is one perfectly acceptable intellectual virtue from Zagzebski's list. To over-use such testifying would rob the learner of the opportunity to develop a range of intellectual virtues, in different contexts, which are both (i) constitutive of the epistemic good life and (ii) instrumental in the achievement of eudaimonia. It could also lead to the learner's becoming a cynical, strategic *Bildungsphilister*, with two distinct doxastic webs: one populated by virtuously-acquired knowledge and some knowledge unavoidably taken on trust, the other filled with atoms of disconnected, inauthentic and unvirtuous 'knowledge for academic purposes'.

Furthermore, while the teacher ought to have a stable disposition to advance both the knowledge and the intellectual virtues of the learners, this is neither the only social role

⁴⁸³ Wright (2010) op. cit., p.109.

⁴⁸⁴ Wright (2010) ibid., p.109.

nor the only context to which the teacher should cleave. Although a full discussion of the moral virtues is outside the scope of the present work, there are clearly times when promoting the epistemic flourishing of the learner is trumped by more general ethical considerations. For example, although it may be *epistemically* virtuous to organise first-hand explorations of porcine eyeballs for a biology class, it would be *morally* vicious to inflict this experience on Muslim pupils, using non-halal pork offal.

Switching between epistemic, moral and social roles in this way is a requirement of the virtuous teacher, and one which depends upon her having a finely-attuned, *phronetic* sensitivity to the learners and the competing desiderata. Here, I intend ‘moral’ to include not only proscriptions (such as on the eyeball dissections above) but also prescriptions for right action, and virtues directed towards a flourishing life.

Intellectual work is not, nor ought it be, conducted in a value-free vacuum; and in many cases the moral and the epistemic are aligned: it is good for the pupil, both morally and epistemically, to know most of the things which are on offer in educational institutions. But if it comes to a clash, the epistemic ought usually to give way to the moral. Having sounded this tocsin, I next develop Zagzebski’s work in new directions by discussing the intellectual virtues which are fitting dispositions for teachers to have.

Virtuous Roles of the Teacher

In examining the epistemic virtues which are pertinent to the teaching and learning situation, it is evident from the discussions above that there will be differences between their relative significance for the teacher and the taught. For example, the other-regarding epistemic virtues are more important for the teacher to exemplify than they are for the learner, if certain common-sense assumptions about testimony and classroom asymmetries are held.

On my analysis, the teacher’s intellectual virtues are important in three distinct yet related ways: viewing her as (1) a knower, (2) an other-regarding epistemic agent and (3) an exemplar of intellectual virtue. All three of these *personæ* potentially enhance the prospects of the learner who interacts with them in acquiring knowledge, but there is also a fourth responsibility for virtuous teacher: (4) to gesture towards the limits of knowledge. I shall consider these in turn.

1. Teacher as Knower

First, if the teacher is herself a ‘good’ epistemic agent, she is *prima facie* well equipped to further the intellectual journeys of her students. In being animated by the epistemic virtues as part of her own continuing intellectual formation, she has not only acquired a web of propositions, together with suitably coherent interlinking and adequate tethering (both positive and counterfactual), but has also further entrenched these virtues by habituation. Being equipped thus with both intellectual virtue and knowledge is a necessary but not sufficient condition for her to advance optimally the knowledge-acquisition projects of her students, for it only gives her the *potential* to contribute to their projects. This virtuous intellectual investment is readily cashed in pedagogically, however. As David Carr puts it:

... it is not just that well-read and culturally literate teachers are invariably more interesting teachers ... but that such broader wisdom and understanding [leads to] ... correspondingly enhanced interpersonal capacities.⁴⁸⁵

Written into the idea of cultural literacy, being well-read and, particularly, having ‘wisdom’ and ‘understanding’, is the proviso that the development of this desired state is, and continues to be, intellectually virtuous. If this is not the case for a particular teacher, then Dickens’ warning in *Hard Times* ought to be heeded:

He had worked his stony way into Her Majesty’s most Honourable Privy Council’s Schedule B, and had taken the bloom off the higher branches of mathematics and physical science, French, German, Latin, and Greek. He knew all about all the Water Sheds of all the world (whatever they are), and all the histories of all the peoples, and all the names of all the rivers and mountains, and all the productions, manners, and customs of all the countries, and all their boundaries and bearings on the two and thirty points of the compass. Ah, rather overdone, M’Choakumchild. If he had only learnt a little less, how infinitely better he might have taught much more!

On the other hand, if the teacher has acted from intellectual virtue to equip herself with wide-ranging knowledge, the picture is rosier, but there is still a need to pay attention to the epistemic predicaments of her students and not merely download all of this ethically-sourced knowledge uninvited. For this valuable pedagogical potential to be doxastically active with respect to the learners, some alignment must exist between her project and theirs. This leads to a second way in which the intellectual virtues of the teacher are important: her other-regarding epistemic virtues.

⁴⁸⁵ David Carr (2007) ‘Character in Teaching’, *British Journal of Educational Studies*, vol.55, no.4, p.386.

2. Teacher as Bearer of Other-Regarding Epistemic Virtue

As we saw earlier, (p.122) Jason Kawall places much emphasis on truth-telling as an other-regarding epistemic virtue. This is undoubtedly an important part of teaching, but we know in the light of much previous discussion that seeing clear testimony simpliciter as a reliable way of enhancing the epistemic position of students is a little naïve. I have already challenged Kawall's view that the epistemology of teaching reduces to the question: 'How can an agent best transmit information and knowledge to others in her epistemic community?',⁴⁸⁶ and have suggested that teachers are better conceptualised normatively as benevolent epistemic agents who are motivated to enhance the knowledge webs of learners by whatever means seem to be both virtuous and effective. Even if these means turn out to be straightforward testimony, we still ought to deploy what Henri Bergson terms '*tact de la vérité pratique*'⁴⁸⁷ in order to 'tune in' to what our students need from us at that moment – whether they know it or not – and to provide it obligingly and virtuously.

We use sympathetic judgement and understanding of our interlocutor (Aristotle's *sungnōmē* and *sunesis*⁴⁸⁸) to 'think[s] with the other and undergo[es] the situation with him'.⁴⁸⁹ In doing so, our testimonial interventions are more likely to help the learner on his way. Martin Buber uses the Latin phrase '*imitatio dei absconditi sed non ignoti*',⁴⁹⁰ in this regard, to suggest the teacher's freely giving of an unbidden service. The teacher offers a pedagogical relationship to the pupil, even though he may not be aware that this offer has been made. The relationship is initially unbalanced, in that the teacher 'experiences the pupil's being educated, but the pupil cannot experience the educating of the educator'. Moreover, once the pupil fully takes on board the offered perspective, the teacher's work is at an end: 'In the moment when the pupil is able to throw himself across and experience from over there, the educative process would be burst asunder, or change into friendship.' I addressed these aspects of teacherly virtue at greater length in the earlier chapter on 'Other-regarding Epistemic Virtue'.

⁴⁸⁶ Kawall (2004) op. cit., p.271.

⁴⁸⁷ 'Tactfulness in practical truth.' From a speech at the Sorbonne prize-giving of 1895 (in Hans-Georg Gadamer (1975) op. cit., p. 25.

⁴⁸⁸ Aristotle, *Nicomachean Ethics*, bk.6, ch.11.

⁴⁸⁹ Gadamer (1975) op. cit., p.288.

⁴⁹⁰ 'In imitation of a God hidden but not unknown.' Martin Buber (1947) *Between Man and Man* (London: Routledge Classics, 2002) All Buber quotations here are from p.119.

3. Teacher as Epistemic Exemplar

The third mode by which the teacher may act from intellectual virtue to enhance both the knowledge and virtue of her students is by behaving as an exemplar. This is a particularly interesting area, so I develop this theme at some length. Linda Zagzebski has recently described a version of exemplarist virtue theory which treats of the moral virtues.⁴⁹¹ Given her interest in the intellectual virtues and her project to incorporate these into the moral virtues⁴⁹², it is likely that she will eventually bring the intellectual virtues under this exemplarist theory umbrella. She has already departed from Aristotle in arguing that the intellectual virtues are developed by imitation, habituation and the overcoming of *akrasia*, and not by direct teaching,⁴⁹³ so a developing of this theme of imitation, by way of considering epistemic exemplars, is probable in her future writings. In the meantime, I sketch out what the notion of an intellectual exemplar might be, and how teachers can act as exemplars in ways that are helpful to the learner.

Zagzebski uses the Putnam-Kripke theory of direct reference to ground her exemplarist ethics model, so a brief excursus through this is in order. According to the Putnam-Kripke thesis, references to natural kinds such as ‘water’ or ‘gold’ can be fixed by ostension without knowing the nature of the kinds to which they refer. As Putnam has it: ‘The extension of our terms depends upon the actual nature of the particular things that serve as paradigms, and this actual nature is *not, in general, fully known to the speaker*’.⁴⁹⁴ Nevertheless, Kripke maintains that ‘natural-kind words are rigid designators’,⁴⁹⁵ so the ostensive fixing enables the word ‘water’ to refer to the same kind, both before and after the empirical investigations which yielded the identity of ‘water’ and ‘H₂O’. This attaching of a designator to that designated is a community affair. Putnam asserts that ‘the extension of a term is not fixed by a concept that the individual speaker has in his head’ and that there is a ‘division of linguistic labor’,⁴⁹⁶ in which we ‘can rely on a special subclass of speakers’ for recognising whether or not a particular putative instantiation genuinely falls within such an extension. So, we can all point out exemplars of gold and water, but only certain specialists have the ability

⁴⁹¹ Linda Zagzebski (2010) ‘Exemplarist Virtue Theory’, *Metaphilosophy*, vol.41, nos.1-2, pp.41-57.

⁴⁹² Most prominently in Linda Zagzebski (1996) *Virtues of the Mind*.

⁴⁹³ Zagzebski (1996) *VOM*, p.155.

⁴⁹⁴ Hilary Putnam (1973) ‘Meaning and Reference’ Reprinted in Louis Pojman (ed.) (2001) *Classics of Philosophy: Volume III, The Twentieth Century*. (Oxford: Oxford University Press), p.314 [Emphasis added].

⁴⁹⁵ *ibid.*, p.314.

⁴⁹⁶ *ibid.*, p.311.

and apparatus to determine whether the gold in the Golden Temple of Amritsar is pure Au, or if the watery liquid in the ‘nectar pool’ which surrounds it, is actually H₂O. We non-specialists can sometimes be fooled (by iron pyrites [FeS₂] – fool’s gold – for instance) but we cannot all be fooled all of the time, for if all the gold were to be not Au but FeS₂, the designator ‘Gold’ would, by communal consent, refer to what we used to call Iron Pyrites. I shall come back to this latter point after examining what use Zagzebski makes of the Putnam-Kripke theory.

Zagzebski’s main claim in this respect is that we can identify a ‘good person’ without having a full definition of what the term means: ‘Picking out exemplars can fix the reference of the term “good person” without the use of descriptive concepts’.⁴⁹⁷ She further claims that we can all successfully use the term as long as there are some people in our community with the ability to identify exemplars. Our use of the designator ‘good person’ is one of approbation and is, she proposes, prompted by our admiration for the person in question. This admiration is of a pre-theoretical nature, relying on narratives and parables that prime us to recognise those whose goodness makes them fitting subjects for our admiration and emulation. Just as in my fool’s gold example, however, we can be wrong about this. If everyone uses the term ‘gold’ for iron pyrites, then this becomes the designator for that particular natural kind. Similarly, if everyone uses the phrase ‘good teacher’ exclusively for those who achieve high examination results from their pupils, then ‘good teacher’ and ‘teacher whose pupils do well in exams’ become co-extensive. Zagzebski too recognises this fallibility (not specifically vis-à-vis teachers), but she suggests that ‘our emotion of admiration is generally trustworthy’.⁴⁹⁸

My concern here, though, is not the moral exemplars discussed by Zagzebski but their intellectual counterparts. I wish to know if the notion of a paradigmatically good – hence admirable and imitation-worthy – epistemic agent is a plausible parallel to the paradigmatically good moral agent. If this is the case, then the teacher ought to be such an exemplar, in order that students might become intellectually virtuous by imitating her epistemic practices. This will be a gradual process, but, according to Zagzebski in an earlier work, it can be considered virtue-driven from the beginning: ‘... even young children can perform acts of intellectual virtue before they are old enough to acquire

⁴⁹⁷ Linda Zagzebski (2010) ‘Exemplarist Virtue Theory’, *Metaphilosophy*, vol.41, nos.1-2, p.54.

⁴⁹⁸ Zagzebski (2010) op. cit., p.54.

the intellectual virtues. ... [a]s long as they are old enough to imitate the behavior of virtuous persons'.⁴⁹⁹

What seem to be missing from the parallel case, though, are the narratives and parables that ground the learner's admiration. For all our moral stories about the Good Samaritan, Florence Nightingale, Gandhi *et al.*, there are few epistemic counterparts. It is difficult even to think what the equivalent designator might be for the epistemic 'Good Person': 'Scholar?' 'Intellectual?' 'Thinker?' 'Enquirer?' Granted, some scientists have been cited as exemplars, but the focus tends not to be on their careful scholarship or epiphanic insight but on some irrelevant attribute. We think perhaps of cosmologist Stephen Hawking's motor neuron disease or game theorist John Forbes Nash's paranoid schizophrenia.⁵⁰⁰ Both of these scholars may be admirable, but they are hardly imitable, save as *moral* exemplars of triumph over adversity by tenacity. Their eponymous discoveries of 'Hawking radiation' and the 'Nash equilibrium' pale into insignificance in the popular mind, when compared with the more visible trappings of motorised wheel-chair, voice-synthesizer or eccentric behaviour. Missing from popular culture are narratives and parables with an epistemic rather than a moral arc. To be sure, in very specific fields, there *is* much consensus about who the epistemically-admirable agents are. One could easily draw up lists for 'Virtue Epistemology' or for 'Virtue Ethics Applied to Education', for example. But one needs to be personally engaged in the field in question, or in a close cognate, in order to be able to make these judgements: so the beginning student has to take much on trust.

Recognition of the teacher qua epistemic exemplar is not, I suggest, a one-step process. The best we can hope for is that the learner first recognises the teacher as a good person and then emulates some of her attributes and behaviours, including the epistemic class of these. Conversely, if the teacher is seen not as *morally* admirable but as, say, despicable, any exemplary *epistemic* behaviours may well be swamped by the learners' distaste for the person exhibiting them and hence not emulated. It is a rare virtue on the part of a learner to be able to put aside any distasteful moral intuitions about his teacher and emulate her intellectual dispositions. This is an empirical claim rather than a statement of analytic necessity, and we can imagine some – perhaps the more mature –

⁴⁹⁹ Zagzebski, *VOM*, p.280.

⁵⁰⁰ Depicted by Russell Crowe (2001) in the film *A Beautiful Mind*.

learners being able to dissociate the moral and epistemic aspects of their teacher and model themselves on the latter. These will be few in number, I suspect.

A moral compass is acquired before an epistemic one, for, as we have seen, we have no choice but to take just about everything on trust in our early native-language-learning years. Thus we initially possess little discrimination between reliable and unreliable sources of testimony. Even though an epistemic sensibility is eventually developed, our moral intuitions about persons still exert a powerful influence. Of the three key attributes which pupils value in a teacher, two can be considered moral and one epistemic. Decades of research on what pupils feel constitutes a ‘Good Teacher’ consistently reveals the same three dimensions: (i) The knack of keeping order (ii) Good interpersonal relations (iii) Ability to help pupils learn.⁵⁰¹ Although there are undoubtedly interactions between the three, and too impermeable a division is thus untenable, we see that the first two are primarily in the moral sphere and the last in the epistemic. We do not have to draw on Maslow’s hierarchy of need to see that without good order and a congenial social environment, the more rarefied intellectual needs are unlikely to be fulfilled adequately. So, the exemplary teacher must be seen by learners as *morally* admirable – at least with respect to her classroom conduct – before learners will engage with her epistemically or see her as worthy of emulation as an *intellectual* exemplar.

Kai Horsthemke and Mike Kissak develop this theme further and show the importance of the ‘comportment’ of a teacher if she is to be an exemplar.⁵⁰² I take ‘comportment’ here to mean ‘manner’ or ‘bearing’. They use the German gerund *Vorleben* to indicate ‘living one’s life as an example’.⁵⁰³ Horsthemke and Kissak suggest that the word contains some normative force, in that one’s ‘exemplification-in-conduct’ ought not only to be emulable but ought also to be *worthy* of emulation.⁵⁰⁴ This draws a distinction between *Vorleben* as a role-modelling with a moral purpose and role-modelling simpliciter, which is often popularly attributed to celebrities who ‘have been elevated to this status with sudden fame and fortune, without any kind of appropriate

⁵⁰¹ See for example Jean Rudduck & Julia Flutter (2004) *How to Improve your School: Giving Pupils a Voice* (London: Continuum Books) pp.75-79.

⁵⁰² Kai Horsthemke and Mike Kissak (2008) ‘*Vorleben*: educational practice beyond prescription’, *J. Curriculum Studies*, vol.40, no.3, pp.277-288.

⁵⁰³ Since a gerund is a verbal noun, a near-equivalent in English would be, I suggest, ‘role-modelling’. We can refer to ‘the teacher’s virtuous role-modelling’ as if it were a noun, though her activity ‘she models’ is described by a verb.

⁵⁰⁴ Horsthemke and Kissak (2008) op. cit., p.280.

training or instruction’.⁵⁰⁵ *Vorleben* is thus a useful shorthand for ‘worthy role-modelling’. Since an important purpose of education is some degree of learner autonomy, however (bearing in mind my earlier caveat that the ‘feral knower’ is in a sub-optimal position vis-à-vis knowledge [p.93]), this *Vorleben* is not intended to be copied holus bolus. We do not wish the learner to be a clone of ourself. In this regard, Horsthemke and Kissak use the term ‘ethical templates’⁵⁰⁶ to convey a notion of teachers as general exemplars of high standards of conduct, rather than models to be copied slavishly in specific details. In the doxastic realm, we might use the parallel designator ‘epistemic template’. By her engagement with knowledge, the teacher shows in a general, but only partially emulable, way, what a good scholar behaves like.

David Carr too feels that teachers ought to be role-models: ‘... teachers and (perhaps) religious ministers should be models or exemplars of good character for others – rather than simply good technicians or crafts-persons’.⁵⁰⁷ Although he sees teachers primarily as *moral* exemplars, perhaps his point here can be extended to a notion of teachers as *intellectual* exemplars. Indeed, Carr mentions the desirability of teachers seeking the ‘cultivation of habits of wide-ranging enquiry, and of reflection upon the potential of such enquiry for the development of others ...’⁵⁰⁸ This is a complex statement, touching on both self-regarding and other-regarding epistemic virtues, and it needs a little unpacking if it is to further our present concern regarding teacher-modelling of intellectual virtue. Under an Aristotelian scheme, the virtues (including the ‘habit[s] of wide-ranging enquiry’) are able both to contribute to the agent’s eudaimonia, and to be constitutive of eudaimonia. The virtues lead to the agent’s flourishing *and* are themselves elements of such flourishing. So the teacher, in common with any other virtuous person, ought to cultivate the virtues (moral and intellectual) because doing so is both a component of, and a path towards, eudaimonia. However, the teacher, by dint of her calling, also has a particular other-regarding role, so we can variously characterise the cultivation of intellectual virtue in her case as (i) an end in itself, (ii) a route to her own eudaimonia (iii) a model for the students of a virtuous epistemic agent and (iv) a necessary condition for developing intellectual virtue in others effectively. We see that (i) is for its own sake, (ii) is instrumental to the teacher’s flourishing, (iii)

⁵⁰⁵ *ibid.*, p.280.

⁵⁰⁶ Horsthemke and Kissak (2008) *op. cit.*, p.281.

⁵⁰⁷ David Carr (2007) ‘Character in Teaching’, *British Journal of Educational Studies*, vol.55, no.4, p.382.

⁵⁰⁸ *ibid.*, p.382.

is indirectly instrumental to the students' flourishing and (iv) is directly instrumental to the students' flourishing. By involving herself in virtuous 'wide-ranging enquiry', she is modelling what a good knower ought to be, as well as acquiring knowledge and cultivating her own intellectual virtue, which, after suitable reflection, she can put to good use in 'the development of others'.⁵⁰⁹ Although the actions under (i) and (ii) do not directly concern the learner, they nevertheless constitute material for the field-work which he, qua informal classroom anthropologist, is undertaking with respect to his teacher's comportment. It is here that performative contradictions between the espoused and the actual may be noticed by the watchful learner. For example, in a science lesson, the teacher who talks of a 'fair test' and 'respect for the experimental evidence' can be undermined in his eyes when she yields to the temptation to fudge the results of a laboratory demonstration to fit the textbook answer. The message which comes across loud and clear in this scenario is that the intellectual virtues are important neither for their own sake, nor for their contribution to knowledge or personal well-being: what counts, despite the rhetoric and the elaborate scientific apparatus, is the 'Correct Answer' in the book.

So, in addition to collecting informal field-data on the moral behaviour of the teacher, the student is also paying attention to her intellectual activities. Some of these latter behaviours are consciously enacted by the teacher, as when she make an ostentatious display of looking up a word in a dictionary or checking a relative atomic mass on a periodic table of the elements wall-chart – facts of which she is actually already in possession. These would fall under category (iii) above, for her doxastic pantomime is purely for display purposes, is offered as a behaviour to emulate, and is hence indirectly instrumental in cultivating the virtues of her students. She shows visibly and humbly that we too, despite being authorities on our subject-specialisms, must still use trustworthy sources to check, confirm or acquire knowledge.

Other intellectual behaviours of the teacher are not consciously offered as exemplars of good doxastic practice, but they are nevertheless sometimes noted by the students. They can see that we derive pleasure from intellectual engagement; that we become excited by knowledge; that knowledge-acquisition has both helped us to flourish and is also an important continuing part of that flourishing. These things are hard to fake, so perhaps the best way to *appear* to students to be a good intellectual is simply to *be* a

⁵⁰⁹ *ibid.* p.382

good intellectual. There can be no contrivance here: who you are will shine through to the watchful eyes of the learner-observers. Having said this, though, I repeat my earlier caveat that emulation is unlikely unless students first approve of the teacher's acting in accordance with the moral virtues (p.224). An 'untrustworthy, disrespectful, unfair, spiteful, indiscreet, lazy, bullying, humourless, charmless, poorly-motivated or self-obsessed'⁵¹⁰ teacher – to use Carr's description of a teacher who is not 'professionally commendable' – is also not likely to be an effective role-model for the *intellectual* virtues, even if she possesses a full and obvious complement of them.

These first three *personæ* of teachers with respect to intellectual virtue are somewhat constraining (though not unvirtuously), if characterised as invitations or instructions to the learner to engage with the teacher as (i) knower, (ii) guide and (iii) exemplar. But, as we saw earlier, the *telos* of Aristotelian virtue is not consequentialist in that it does not blinker its bearer into obediently following a road leading to pre-determined ends (p.207). Similarly, neither is the Romantic ideal of the individual making his own destiny via *Bildung* one of safely staying on the *Feldwege*. The fourth and final intellectual *persona* of the teacher is thus more concerned to let the learner off the leash so that he can explore for himself the unknowns of the *Holzwege*.

4. Teacher as Mystery-Alerter

Cathleen Stutz and Susan Tauer describe the (university) teacher who awakens such a sensitivity towards mystery in her students as 'exemplary'.⁵¹¹ They contrast the exemplary teacher with her 'competent' counterpart who merely helps her students to 'gain some intellectual skill, some level of proficiency in the subject'.⁵¹² By drawing the distinction in this way, however, there is a danger of equivocation over the word 'exemplary', for now it is not clear whether the exemplary teacher is a model for other teachers to emulate (with respect to their orientating students towards mystery) or a worthy template for the students themselves (as in (3) above: Teacher as Epistemic Exemplar). Nevertheless, their description of an exemplary teacher at work is illuminating in a number of respects. They depict a vignette of a poetry lesson that involves both individual and choral readings and guidance from the teacher about some

⁵¹⁰ Carr (2007) op. cit., p.370.

⁵¹¹ Cathleen Stutz and Susan Tauer (2000) 'The Awakening of Intellectual Virtue', *Boston University Journal of Education*, vol.182, no.2, p.37. They do not write from a virtue-epistemology perspective, and confine themselves largely to an analysis of how university lecturers might act in exemplary ways.

⁵¹² Stutz and Tauer (2000) op. cit., p.41.

of the technical features. The result of all of this prosaic preparatory work is claimed to be as follows:

Those concrete experiences will help a student know how to listen to Yeats' *Sailing to Byzantium*, but the more attentively students listen, the more they will perceive that there are some mysteries in that poem, and in all poetry, that will not be revealed. When teachers can help students develop some proficiency, see inherent mysteries within a discipline and commit themselves to further study, those exemplary teachers have guided the students towards wisdom. What may seem paradoxical is that wisdom, an intellectual virtue, is founded upon mystery.⁵¹³

It seems to me that the 'exemplary' teacher here conforms to the first meaning above [(i) a model for other teachers], for she wishes to induce mystification in her students yet does not model bafflement herself. Indeed, in the vignette her teaching consists of displaying a secure – we might say 'non-baffled' – knowledge of the mechanics of the poem, by using such techniques as 'pointing out the shifts in vowels and consonants', rather than a Wittgensteinian passing over in silence of the things whereof she cannot speak. Notwithstanding this ambiguity, their endorsement of the fostering of an attunement to the unknown in students is a useful one in the light of our earlier discussion.

As well as travelling along the *Feldwege* defined by the teacher's offered propositions, the students now also have the possibility of discovering for themselves that there are many other true propositions which she has not yet encountered. More significantly, they may also come to realise that some true propositions will remain forever out of reach and unarticulated, and that the very project of analysing a poem such as *Sailing to Byzantium* in terms of a series of propositions is radically unfinishable. The students are entertaining the possibility that a lengthy string of propositions ($p_1, p_2, \dots p_n$) will, in some circumstances, always fall short of completeness and thus fail as satisfying knowledge. Not all knowledge can be expressed propositionally. This shortfall is particularly notable in the arts; even those whose practice demands codification in words. The poet Ted Hughes (1967) describes how, when he was a schoolboy, 'I was plagued by the idea that I really had much better thoughts than I could ever get into words'.⁵¹⁴ We might object here that both Wittgenstein's private language argument⁵¹⁵

⁵¹³ Stutz & Tauer (2000) op. cit., p.41.

⁵¹⁴ Gary Claxton (2000) 'The anatomy of intuition' in Terry Atkinson & Gary Claxton (eds.) (2000) *The Intuitive Practitioner* (Buckingham: The Open University Press) p.46.

⁵¹⁵ Ludwig Wittgenstein (1953) *Philosophical Investigations* [tr. GEM Anscombe, 1953] Third Edition (Oxford: Blackwell, 2001) §256, p.78.

and Sapir-Whorf's⁵¹⁶ characterisation of language as a mould that helps shape our thoughts, rather than a cloak which merely dresses them, show Hughes to be philosophically mistaken. Nevertheless, the intuition that there is something elusive about language and thought, and that there is work to be done when straying from the comfortable path, is a powerful one. The village technician illusion that a set of learning outcomes can authentically capture the intellectual effort of learning in such a liminal area is also dispelled. Missing too from the typical targets of the educational technician is the notion that the *enjoyment* of intellectual engagement is a respectable goal of education. We turn next to this idea, which appears somewhat radical when stated starkly even though it flows from the Aristotelian notion of the virtues in action as constitutive of eudaimonia.

Delight as a Mark of Virtue

One signature of virtuous activity is, according to Aristotle, delight, for: 'The man who does not rejoice in noble actions is not even good; since no one would call a man just who did not enjoy acting justly...' (p.61). The implications of a virtue approach to education are not without their difficulties in this respect, however. Indeed, even David Carr, who is usually sympathetic to such a general approach, counsels that, although they are good things, '... enjoyment, satisfaction and so on ... are only contingently related to learning outcomes [and] it is not at all clear how these might constitute *educational* aims of teaching'.⁵¹⁷ Pace Carr, the further development and implications of virtue epistemology show that enjoyment can be an educational aim, for genuine knowledge can only be acquired virtuously, and a signature of virtuous action is delight. This conclusion ought to be tempered by two qualifications, however.

The first relates to the unarguable observation by Carr that '... parents would have cause to complain about any teacher who had made his or her pupils happy or confident without teaching them anything'.⁵¹⁸ To accommodate this, we accept that 'happiness'⁵¹⁹ is a necessary but not sufficient sign of virtuous learning. As an

⁵¹⁶ Benjamin Whorf (1956) *Language, Thought and Reality* (Cambridge, MA, USA: MIT Press).

⁵¹⁷ David Carr (2003) *Making sense of education: an introduction to the philosophy and theory of education and teaching* (Abingdon: RoutledgeFalmer) p.114.

⁵¹⁸ *ibid.*, p.114.

⁵¹⁹ I use the scare quotes around 'happiness' to acknowledge that this need not indicate anything as strong as joy or euphoria. It is here as shorthand for something closer to Carr's 'enjoyment and satisfaction'.

indicator of learning it would not be enough to satisfy those of a positivist cast, being elusive and unreliable, but the notion that it ought to be present at certain points in the virtuous learning process is an appealing one. We recognise in our own learning journeys those pleasurable moments of insight when a new path opens up to us. If we are well attuned to our students, we may see the gleam in the eyes of those who have now ‘got it’. Both the processes of learning and the products of learning (which, for the purposes of the present work, we take to be propositional knowledge) can lead to these brief occasions of uplift.⁵²⁰ However, while pleasure ought to accompany virtuous learning, its presence is not a reliable signal that such learning has taken place: the glint in the student’s eye might have an entirely different cause. As Aristotle points out, a well-ordered affect in the intellectual sphere requires preparation, for, ‘...the soul of the student must first have been cultivated by means of habits for noble joy’.⁵²¹ We note that this is noble joy, not ignoble hedonism. Before he reaches this state, the student may do the right thing intellectually, but only in a continent, joyless manner, rather than being due to an educated desire. The signs of pleasure we observe could thus originate from some less elevated source.

The second qualification involves counterposing the argument, to conclude, wrongly, that a lack of enjoyment indicates the absence of virtuous learning. In practice, we know that some students bring their personal problems with them into the classroom, such that any positive effects of an occasion of virtuous learning might well be swamped by their prevailing low mood. The student might view the classroom as a safe oasis of calm in the midst of a chaotic and harsh private life, and may well be able to learn virtuously but not show much by way of overt pleasure. Furthermore, it is unrealistic to expect learners to manifest continuous delight in their learning, for there

⁵²⁰ There are links here with Mihaly Csikszentmihalyi’s notion of ‘flow’ experiences: ‘state[s] in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it ... for the sheer sake of doing it.’ In the classroom we sometimes see pupils in this state, and we ourselves can experience flow in our teaching, which in turn draws pupils into becoming more engaged with their learning. I suggest that if our attunement is in good order, we can recognise our own state of pedagogical flow and its effects on our learners, and differentiate it from mere self-indulgent *parrhesia*. Although Csikszentmihalyi’s work is based on empirical psychology, he makes fleeting reference to the *Nicomachean Ethics* bk.I and bk.IX. Mihaly Csikszentmihalyi (1991) *Flow: The Psychology of Optimal Experience* (paperback edition) (New York: HarperPerennial) p.4

⁵²¹ Aristotle, *Nicomachean Ethics*, bk.X, 1179b25 (*Revised Oxford Translation*). We should interpret this with a little caution, though. Book 10 goes against the grain of the preceding books by placing the intellectual life above all others: ‘the life according to intellect is best and pleasantest, since intellect more than anything is man. His life, therefore is also the happiest’ (1178a6). But, in this book he is valorising specifically the ‘contemplative activity’ of ‘those who know’, not the intellection of ‘those who enquire’. (1177a22-27). Nevertheless, in the Aristotelian scheme, virtuous activity of any kind ought to bring enjoyment to the well-habituated person, so we can take his ‘noble joy’ to accompany cognitive activity other than the contemplation of eternal truths.

is an ebb and flow to the process which will be mirrored in a changing affect. Times of *elenchus*, in particular, involve some degree of discomfort rather than joy: we think of Socrates' metaphorical images of being stung by the torpedo fish,⁵²² or being dealt a blow by a good boxer.⁵²³ Moreover, our other-regarding pedagogical intentions may, indeed should, on occasions be *telic* rather than *skopic*, so the doxastic pay-off, and the consequent pleasure, will only be manifested at some point in the future. The enjoyment is then an *indirect* aim, in the sense discussed earlier (p.140).

A consideration of enjoyment, or the lack of it, also points the way, though, to a principled justification for attending to the *skopoi* – a reason which is more worthy than one of a mere prudent response to the exigencies of short-range targets. We have seen that an absence of 'happiness' in the learners need not be unduly alarming to teachers, for it may be masked by low mood or may appear later when a particular pedagogical *telos* is reached. But a permanent lack of happiness, a pervasive low self-esteem and dissatisfaction with learning, will almost certainly have deleterious consequences for virtuous learning: a persistent negative affect will militate against the receptiveness and open-mindedness needed for such learning. Here, the well-attuned and other-regarding, epistemically virtuous teacher can intervene positively by having the learners tackle a small, easily-attained *skopos*. Thus, the learners achieve some limited epistemic target, experience the attendant feeling of uplift and have their faith restored in the pleasures of learning. Because the teacher has acted successfully in ways animated by other-regarding virtue, she too should experience some satisfaction.

This stratagem ought not to be overdone, however, or what I have termed the 'new Athene problem' (p.203) might arise. Some degree of instant doxastic gratification is needed from time to time, in order to keep learners' spirits up, but a tolerance for deferred gratification in overcoming the various aporias that are part of significant learning is an important intellectual disposition to be cultivated. Joel Kupperman points out the dangers to the character-development of students when 'teachers out of a misplaced kindness tried to make success easy and immediate for their students, and failure highly unlikely'.⁵²⁴ Even better than mere tolerance for deferred gratification would be *nikhedonia*: a pleasurable anticipation of future success. Thus the learner

⁵²² Plato, *Meno*, 80.

⁵²³ Plato, *Protagoras*, 339e.

⁵²⁴ Joel J Kupperman (1999) 'Virtues, Character and Moral Dispositions', Jan Stuetel & David Carr (eds.) (1999) *Virtue Ethics and Moral Education* (London: Routledge)

would not retreat from puzzlement, or demand an instant resolution of ‘*p* or $\sim p$?’ , but would engage virtuously with the recalcitrant ideas in a spirit of “*Saper aude!*” until the deserved moment of clarity came. In practice, this scenario, in its extended form, is more common in the postgraduate phase, but modest versions ought to be judiciously allowed at all stages of education, so that the virtues of epistemic courage and perseverance are cultivated in a process punctuated by delight.

Open-mindedness

‘[O]pen-mindedness in collecting and appraising evidence’ appears on Zagzebski’s list of intellectual virtues (*VOM*, p.114), and ‘closed-mindedness’ is identified as one of the intellectual vices (*VOM*, p.152). This is a particularly salient pair of attributes in the teaching and learning situation and I argue next that exemplifying the virtue and avoiding the vice is important to the teacher, both as a route to her own knowledge and also for the sake of *Vorleben* for her students.

If we now address the virtue, we may initially assume that exercising open-mindedness defeats a tendency to closed-mindedness and that this is necessarily an epistemic good. This assumption would be an over-simplification, however, for open-mindedness seems to be the kind of scalar attribute which permits of degrees characterised as excess, deficit and virtuous mean. One could be so open-minded that ‘one’s brains fall out’⁵²⁵: the excess named ‘credulity’.⁵²⁶ Conversely, one could be so lacking in open-mindedness that one’s disposition is better described as closed-minded, and this extreme deficit of open-mindedness could be labelled ‘corrosive dogmatism’. An Aristotelian mean between these extremes would be to instantiate the right degree of open-mindedness, in the right way and for the right reasons. This, it seems to me, is the disposition at which teachers ought to aim, both for their own epistemic well-being and for that of their students. Furthermore, the desirability of cultivating such a mean extends beyond the epistemic, for belief may issue in action and faulty beliefs may be the spur for actions which compromise the individual’s flourishing. For example, a belief that crystal healing has some merit beyond a mere placebo effect could cause an epistemic agent to place her faith in a gemstone rather than accept the need for more

⁵²⁵ This phrase is common in discussions of open-mindedness. The earliest source I have found is Max Radin (1937) ‘On Legal Scholarship’, *The Yale Law Journal*, vol.46, no.7, pp.1124-1141, p.1133.

⁵²⁶ Here ‘credulity’ is a vice, but Reid treats it as a virtue to be co-ordinated with ‘veracity’.

robust medical intervention to treat a serious condition. In this case, her excessive open-mindedness towards the occult (involving too generous an appraisal of any evidence for healing, perhaps coupled with a closed-minded antipathy to scientific medicine) could be both epistemically and physiologically damaging. On the other hand, an unwillingness to entertain new ideas (especially those which clash with the agent's pre-existing belief-sets: Socrates' 'provocatives' which 'issue in a contradictory perception'⁵²⁷) could also limit her well-being, by closing off the learning of new beliefs which might potentially have been the spur to some rewarding actions. Here, a deficit of open-mindedness has limited the eudaimonia of the agent, both constitutively and instrumentally, in that being able to apply the right degree of open-mindedness is a virtue and hence would have been rewarding both in itself and also in respect of the benefits to which it might have led.

Open-mindedness is, it seems to me, an attribute relevant chiefly to an epistemic agent's attitude to testimony. To a first approximation, we are not typically open-minded about direct experience: we do not carefully weigh up the pros and cons of forming a perceptual belief but are forced to take doxastic short-cuts in the interests of epistemic economy. A naturalistic explanation for this tendency could be that those early humans of the Pleistocene era who rigorously evaluated any perceptual evidence indicating impending attack by a predator did not survive long enough to be our ancestors. We have thus inherited a propensity to believe what we seem to see and to act on it promptly if it represents a danger. On crossing the road, we do not feel a need to defuse sceptical arguments before getting out of the way of the tram that seems to be on a collision course with us. Thus, perceptual beliefs are largely non-voluntary and, since we have no choice about them, we can neither be credited with open-mindedness nor accused of closed-mindedness in acquiring them. Even so, they may well represent knowledge. However, I opened this paragraph with the delimiter 'to a first approximation', for it is clear that some less-threatening perceptual beliefs *are* filtered by previous experience and other beliefs, so thus have some degree of voluntariness. For instance, a connoisseur of Impressionist paintings could carefully form a belief about the authenticity of a newly-discovered work which was *prima facie* thought to be of that genre. This is a perceptual belief – being based on what the expert sees – but it is filtered by experience and not forced upon him in the same way as the early human having no choice about recognising and responding to the threat from a sabre-toothed

⁵²⁷ Plato, *Republic*, 523b-c.

tiger. There is a problem in this analysis, though, in that equating open-mindedness with voluntarism conflates the intellect and the will. The difficulty can be overcome by considering what we might term first-order and second-order choices. We may choose to be open-minded *in general*, and entertain a number of competing points of view, while accepting that we have no control over certain *specific* beliefs (for example: Danger! Tiger!). Choice concerns only second-order dispositions, which, for minds like ours, will be over-ridden by more pressing, choice-free perceptual knowledge when the need arises.

Next, we shall explore further the nature of a virtuous, open-minded approach to testimony, including the apparent conflict between holding firm beliefs and being open-minded. Although this discussion is of key interest in the educational context, I deal first with the issues in general, before returning specifically to teaching and learning.

Our earlier discussions of testimony used the vignette of the stranger asking a passer-by the way to Larissa as a paradigm case of testimony-giving (p.79). In the absence of signs to the contrary, the stranger assumes not only that the local person is competent to give directions but also that he is sincere in his intention to guide him to the best of his knowledge. Having no choice, the stranger acts on the basis of this testimony. This acceptance is based on the a posteriori default rule we met earlier (p.85):

If a speaker S asserts that p to the hearer H, under normal conditions, then it is proper and correct for H to accept S's assertion, unless H has special reason to object.⁵²⁸

Its a posteriori nature is such that the phrases 'normal conditions' and 'special reason to object' only acquire meaning after *s* has built up experiences of cases saliently similar to the one under consideration. One has only to have had a few experiences such as being approached by a young man and told (wrongly) that, "The pyramids are shut today, but my shop is open",⁵²⁹ to formulate by induction the informal general rule that being approached thus with unsolicited advice usually constitutes 'special reason to object.' Conversely, if one interrupts an older woman who appears to be shopping and asks her for directions, these conditions are normally congenial to truth-telling, for she

⁵²⁸ Uebel (2009) op. cit., p.5.

⁵²⁹ This was written before the Egyptian demonstrations of early 2011.

is less likely to have a deceptive agenda (Locke's 'interest'⁵³⁰) and will typically default to sincere helpfulness.

Whether or not we accept the deliverances of testimony with respect to a particular utterance is, however, usually a matter of choice for the auditor. Unlike perceptual beliefs, any propositions offered via testimony which pose an unwanted challenge to our pre-existing belief-web, are capable of being screening out by epistemic agents such as us. Doing this leaves our web intact, but blocks the possibility of its being improved by means of virtuous belief-revision, and so may constitute the vice of closed-mindedness. As we have seen, though, open-mindedness can be overdone, and there is something of a clash between believing firmly *and* claiming to be open-minded: a clash we shall examine next.

Jonathan Adler explores this issue of an ostensible incompatibility between open-mindedness and the firm holding of beliefs. He quotes Peter Gardner's example of 'a teacher who affirms: "I am open-minded about whether racism is evil, but I believe it is"''.⁵³¹ We might judge that in attempting to assert an intolerance towards intolerance, yet claiming to be open-minded, the speaker seems to be guilty of self-contradiction. This tension looks, on the face of it, to parallel Moore's Paradox, notes Adler:

P, but I do not believe that P. e.g. It's raining, but I do not believe that it's raining.⁵³²

This paradox, I suggest, dissolves when rephrased as:

It could be the case that p, but I do not believe that p.

However, this has downgraded the statement's doxastic status to one more akin to agnosticism rather than the all-out disbelief that Moore's statement asserts: although the agent's present stance is one of disbelief, this is not firmly held. Such a move would not satisfy Adler, for he denies that beliefs admit of degree and he thus requires an 'all or nothing' commitment to beliefs such as the evilness of racism. His key

⁵³⁰ Locke (1706) *Essay*, bk.IV, ch.XVI, §11.

⁵³¹ Peter Gardner (1993) in Jonathan Adler (2004) 'Reconciling open-mindedness and belief', *Theory and Research in Education*, vol.2(2), pp.127-142, p.128.

⁵³² Adler (2004) op. cit., p.129.

reason for the claim that ‘few of our beliefs are held as degrees of belief’ is that ‘it would introduce too much complexity for coherent thought’. This does not seem right. A web of beliefs would contain a large number of propositions, linked in complex ways and possessing variation in what we might call ‘tensile strength’. Under epistemic or situational stress, some beliefs might fail, while others would remain intact. For example, we can imagine the *weakly* anti-racist passer-by in early twentieth century Alabama apparently urging on the lynch-mob, because his belief that ‘discretion is the better part of valour’ is more durable than his commitment to a characterisation of racism as evil. This akratic failure then forces him later to re-evaluate his various competing beliefs more honestly. He may later decide, for the sake of consistency, to adopt racist views that are more in line with his actual behaviour, or he may continue with his former views but despise himself for his incontinence. It is plausible that we become most aware of the relative doxastic strengths of competing propositions when we are forced to *act* in a way congruent with either one or the other, in a dichotomous fashion such as this.

Adler’s own solution to the problem is, I feel, an interesting one, with a satisfying theoretical generalisability. It has something in common with my ‘Tiger!’ discussion above. In essence, he suggests that we can hold a *particular* belief firmly, yet still admit to a fallibility with respect to our *overall* web of beliefs (although Adler does not use the term ‘web’). By this, he does not mean to imply that we would countenance a holus bolus paradigm shift involving our entire web, but rather that we acknowledge the presence of hitherto-unknown flaws distributed around it.⁵³³ We recognise that there will be mistakes in the web, but when inspecting any particular element of the web – say p_1 – we affirm that this, pro tanto, is not among them. Such a model then leads Adler to a definition of open-mindedness that I feel convincingly defeats Gardner’s ‘anti-racist yet open-minded teacher’ problem:

Open-mindedness is then a second-order (or ‘meta’) attitude toward one’s beliefs as believed, and not just toward the specific proposition believed, just as fallibilism is a second-order doubt about the perfection of one’s believing, not a doubt about the truth of any specific belief.⁵³⁴

Gardner’s teacher can now be a full blooded holder of anti-racist beliefs, yet still allow for the possibility of their revision qua members of an inescapably flawed overall

⁵³³ Sites of ‘compound ignorance’, as al-Naraqī puts it. Muhammad Mahdi ibn abi Dharr al-Naraqī (n.d.) op. cit.

⁵³⁴ Adler (2004) op. cit., p.130.

belief-set. She is not open-minded about racism as a specific belief, but she is open minded about beliefs in general. Her general willingness to revise *any* belief, given strong enough contrary grounds, is a measure of her open-mindedness: but it implies no admission beforehand that she may have erred in the particular case. We might add that if her original belief had been acquired virtuously, it would possess a security which militates against too easy an abandonment in the face of weak evidence to the contrary. Even strong counter-evidence need not automatically lead to the belief being jettisoned, for the model of a Quinean web of beliefs always allows for adjustments to be made elsewhere in order to save a treasured belief. There are certain core propositions and values which we would strongly resist derogating.

Having considered the relationship between testimony, belief and open-mindedness in general, we now return to the educational situation.

In the case of formal teaching and learning, the testimonial context is precisely not like the paradigm case of asking a passer-by the way to Larissa. Most classroom interactions take the form of the testifier offering *unsolicited* testimony to the auditor, and would thus normally be a cause for suspicion on the part of the auditor, thereby constituting Ubel's 'special reason to object' (p.85). However, the testifier here is not a local person with a self-serving agenda, approaching some innocent abroad, but a teacher who has, by dint of qualifications, the meeting of licensing requirements, professional experience, teaching track-record, perhaps publications, and so on, established her credibility as a source of testimony in a particular domain. Even if the significance of these positive signs is not known to the auditor, that the processes of educator recruitment, selection and appointment have in fact taken place gives inductive support by proxy to the auditor's doxastic reliance on the deliverances of her testimony.

The anti-reductionists (who, we recall, regard testimony as innocent until proven guilty) would allow an a priori, pro tanto acceptance of this teacher-testimony without such support, but the epistemic situation of the teacher is enough to satisfy even the more stringent criteria of the local reductionists, who treat testimony as guilty until a reliable track record is established. The learner, then, has the epistemic right to believe the teacher, as far as the teacher's speciality is concerned, and herein lies a problem. By believing what he is entitled to believe (a right, as we saw, accepted even by the

lights of reductionism [p.85]), he appears to be behaving with epistemic virtue, but he is nevertheless acting in a way not conducive to longer-term intellectual flourishing, so in fact his behaviour is unvirtuous. He is being too open-minded or too willing to drop previously-held beliefs (or perhaps merely going through a pretence of believing: an instance of *Halbbildung*). Here, we must distinguish once again between the *skopoi* and the *teloi*. Acting with epistemic virtue and doxastic efficiency now – by unquestioningly accepting the teacher’s testimony – may not be so virtuous when the long view is taken, for this is not the only route to knowledge, nor can testimony always be trusted. To be too *skopic* in orientation is not virtuous. As we saw earlier (p.92), some testifiers have a non-epistemic agenda, so, in developing an epistemically-virtuous approach to testimony, as in cultivating any desirable disposition, the agent needs to become habituated to a good way of acting, given the way the world actually is. He ought to progress from the naïve credulity of his early years to a more nuanced receptivity befitting the sophisticated learner. We turn next to how such progress is made.

Habituation to Cultivate the Intellectual Virtues

It is by repetition that virtues are acquired, according to Aristotle: we become good by performing good acts. This habituation is a staged process, proceeding initially by imitating virtuous persons. Gradually, with continued practice and the overcoming of *akrasia*, the virtues are internalised and the person can be regarded as virtuous in the sense of having a ‘firm and unchangeable character’ [*VOM*, p.155]. It is important to remember here that Aristotle regards the acquisition of the intellectual virtues differently from that of the moral virtues: the former being by instruction and the latter by imitation and habituation. He regards intellectual excellences as different from moral excellences, and residing in different parts of the soul. However, I accept Zagzebski’s argument that both the moral virtues and the intellectual virtues are developed by emulation, practice, the defeat of *akrasia*, continence and, finally, internalisation. We see that the learner does not, for example, acquire the intellectual virtue of having ‘... the ability to recognise the salient facts’ (*VOM*, p.21) by being directly instructed in saliency, but by having opportunities to develop and practise an eye for saliency modelled on the virtue observed in action in the teacher’s epistemic practice. We could envisage, for example, the teacher elaborating upon the first paragraph of a text in plenary, then assigning pairs of students to the remaining

paragraphs, with the task of similarly unpacking and identifying the key points of their allotted paragraph. Here, we see in action the notion of the teacher as exemplar that I developed earlier in this chapter (p.222).

The trouble is that such opportunities for imitation and practice are often unavailable to the learner, or else are undermined by classroom exigencies. If what counts (for assessment purposes) in the example above is that the key points of the text be learnt, then having the students stumble around searching for saliency themselves may appear to be both inefficient and an abdication of the teacher's role. So, instead of allowing the students to find out for themselves, unambiguous testimony about what is salient in the text, expressed in the most vigorous terms, replete with mnemonics, tricks of the trade, shortcuts, strong images, vivid metaphors, useful tips and simplifications is deployed, as ostensibly the most reliable way to 'get it across' and 'make it stick'. By many students, these are seen as the actions of a good teacher. For 'success', the student has merely to acquiesce in this process by being a receptive auditor and a diligent memoriser. However, if one uses a virtue perspective to question the desirability of such one-way transmission and challenge the definition of success implied by this description, a different picture emerges.

The teaching can now be seen as vicious, in that the teacher's approach bespeaks closed-mindedness, and the students are guilty of the vice of credulity. My example is not even the worst type of passive epistemic vice. In extreme cases, 'in countries like Pakistan, where the language is not Arabic, children who spend their days memorizing the Qur'an do seem to be reduced to the status of tape-recorder'.⁵³⁵ Perhaps such criticism is unfair to most transmission-orientated teachers, though. In terms of moral and epistemic *teloi*, such a teacher, I have argued, is acting neither virtuously nor effectively. But with respect to epistemic *skopoi*, the teacher *is* hitting the target in a highly efficient manner. Her sense of moral purpose may also well be beyond reproach, if viewed against a short time-scale. Indeed, we often hear teachers expressing explicitly myopic, yet strategic, sentiments such as, "My job is to get them

⁵³⁵ Roberts & Wood (2007) op. cit., p.262. Although we see what they mean, Roberts & Wood are undeniably outsiders to this process (both being US Christians) and will have a very different perspective to the insiders. Some of us who remember the Latin Mass are grateful for having encountered various mysterious phrases whose meaning was only revealed after years of rote-learned response, and perhaps the *telos* of some madrasas is similarly longer-range. However, if the entire curriculum consists purely of the non-virtuous learning of an unknown tongue, we would have to class it as vicious by secular educational criteria.

the points [A-level grades, etc]. Once they make it to university they can start thinking for themselves.” In a sense, the teacher is trying to do the best she can for her students, by helping them to hit immediate epistemic targets, using any means short of the illegal or the immoral.⁵³⁶ The student has the right to accept this help, an entitlement predicated on the likely truth of the teacher’s testimony and the absence of any warning signs to the contrary.

However, an over-reliance on such *skopoi*-friendly practices carries with it the danger of fostering a habit of passive acquiescence on the part of the learner. William Hare spells out the long-term hazards of such habituation:

Even if teachers were invariably reliable and accurate, it would not be desirable for students to develop a habit of uncritical deference at school which will not serve them well in the wider world where they will need to invoke a critical attitude towards many claims, some put forward by charlatans, but some also by experts.⁵³⁷

The difficulty here, if we can label it as such, is that most teachers fall into the broad category of relative ‘expert’ rather than that of ‘charlatan’, and pupils generally do not have enough knowledge, experience or intellectual confidence to challenge their teacher in her domain of expertise. This being so, in the conventional classroom, pupils are characteristically not given adequate opportunities to develop their critical powers. Supporting such development in formal learning situations is not a straightforward matter, though, for an even more serious difficulty would arise *were* teachers to be charlatans – even part-time pseudo-charlatans for sound pedagogical reasons – for this could undermine the trust which is a vital component of virtuous student-teacher relations.

Moreover, once the genie is out of the bottle and students form the opinion that *all* sources of testimony are contaminated in one way or another, a corrosive cynicism could take hold, a vice possibly even more epistemically counter-productive than the habit of passive acquiescence which it replaced. The teacher who has taught students to challenge all claims to knowledge may be hoist by her own petard and disbelieved, along with all the other apparently authoritative voices whose debunking she encouraged.

⁵³⁶ Having said this, I should point out that stories surface periodically in the press concerning teachers who *do* cross this line – often claiming to have acted in a moment of madness but with the best interests of the students at heart.

⁵³⁷ William Hare (2007) ‘Credibility and Credulity: Monitoring Teachers for Trustworthiness’, *Journal of Philosophy of Education*, vol.41, no.2, pp.207-218, p.211.

Clearly what is needed here is that students are helped to cultivate a sensibility that can recognise and accept credible testimony (including most of the teacher's) and, at the same time, identify those sources and occasions for which a more guarded stance is indicated. They need to be able to 'disaggregate' the various types of testimony – as Elizabeth Fricker puts it (p.96) – and treat each one accordingly. Acquiring an attunement to testimony – in both its simple and extended⁵³⁸ forms – is an important part of becoming a sophisticated epistemic agent who is able progressively to enhance his cognitive contact with reality by combining the deliverances of testimony with those of perception, memory and reasoning. The process is not a simple one, so the learner will require time and exposure to bring his sensibility into alignment with the cultures into which he is being inducted. A discernment ought to be cultivated, for example, which sees a debate about the authorship of Shakespeare's plays as proper, but dismisses out of hand a suggestion that these might be twentieth-century works. To be in this position is not simply a matter of being alert to obvious warning signs (for instance, spelling and grammatical mistakes and a suspect provenance of key propositions in a web-page) but rather one of being something of an insider to the field in question.

To develop what we might term 'epistemic connoisseurship' in the students is the work of a teacher, motivated by other-regarding epistemic virtue. In this activity, we are inducting the students into practices, helping them to become tyro 'mathematicians, literary scholars, historians',⁵³⁹ and so on. We wish for others what we have ourselves: an enwebment with a subject-discipline and a set of relevant virtues, overseen by *phronēsis*. It is only part of our task, however, and in our *praxis* as teachers we need a range of virtues (again governed by *phronēsis*) in order to support the learner in his acquisition of knowledge and epistemic virtue. We consider these next.

⁵³⁸ That is, from written texts, websites and so on.

⁵³⁹ Alasdair MacIntyre & Joseph Dunne (2002) 'Alasdair MacIntyre on Education: In Dialogue with Joseph Dunne', *Journal of Philosophy of Education*, vol.36, no.1, 2002, p.5. Dunne has a firm view on teaching being a practice in its own right, but his interlocutor MacIntyre is more ambivalent: 'It's not clear to me how far we disagree. You say that teaching is itself a practice. I say that teachers are involved in a variety of practices and that teaching is an ingredient in every practice.' *ibid*, p.8. Since the present thesis argues the case for the teacherly virtues, crowned by *phronēsis*, and sees the internal goods of education as a major constituent of the learner's overall flourishing, as well as being worthwhile in themselves, it displays no such ambivalence.

Teacherly Virtues

Attempts have been made in the past to list the teacherly virtues⁵⁴⁰ – one famous example being Brother Agathon’s/John Baptiste De La Salle’s *The Twelve Virtues of a Good Teacher*:

Thus, we might list Wisdom first, because it presents the main objective, the total objective that a teacher should propose to himself. Prudence might be placed second, because it makes a teacher know how he should act so as to fulfill his role properly. Then the other virtues should follow, each in its place, and the work might end with Gentleness, the crowning virtue of a good teacher, thanks to the value given it by Charity, the queen and mistress of all virtues.⁵⁴¹

This notion of a hierarchy of such teacherly virtues, with wisdom and prudence at the top, but ‘crowned’ by gentleness and charity is an attractive one, even though it is eventually dismissed by Agathon: ‘But such an arrangement seemed to us a merely artificial one, of no real utility’. Some of his advice on teacher virtue still rings true in the context of the contemporary classroom or seminar room, but several of his pronouncements seem to lack both theoretical and practical justification. For example: ‘[the teacher] must also refrain from making faces, joking, striving for humour.’ In Appendix B, which we shall discuss in a moment, I ignore this rather po-faced advice and include Aristotle’s virtue of *eutrapelia* (wittiness: the mean between boorishness and buffoonery). Other assertions bespeak the tradition of monastic obedience in which the work is situated: ‘A good teacher ... will not fail to follow faithfully the book of the *Conduct of Christian Schools*, which was drawn up and is based entirely on the careful consideration of long experience.’

In Appendix B, I attempt a more secular version of De La Salle/Agathon’s project, in order to assist the reader, and gather, all in one table, the teacherly virtues which have been identified throughout this thesis. These are not presented in a free-standing

⁵⁴⁰ There is very little published material on virtues in teachers. In a recent paper, the notion of the virtuous teacher in one particular context has been rather bizarrely defined as: a cadaver. The title of ‘Virtuous Teacher’ apparently ‘motivates donors to take the role of highly revered teachers of future doctors. One enlisted donor spoke to a class of anatomy students one year before passing away, saying that he would allow students to make wrong incisions on his body so they can learn and prevent future errors on a live patient.’ Steven C. Lin, Julia Hsu, Victoria Y. Fan (2009) ‘“Silent virtuous teachers”: anatomical dissection in Taiwan’, *British Medical Journal*, vol.339, p.1438

⁵⁴¹ Brother Agathon (1785) *The Twelve Virtues of a Good Teacher (Les Douze Vertus d’un bon Maître)* [tr. Brother Gerard Rummery, 1998] [Online] available at: <http://www.napcis.org/12VirtuesGoodTeacher.pdf> [accessed 19 Sep 2010]. This work was based on John Baptiste De La Salle’s list of teacherly virtues: Gravity, Silence, Humility, Prudence, Wisdom, Patience, Reserve, Gentleness, Zeal, Vigilance, Piety, and Generosity.

fashion but are co-ordinated with the epistemic virtues to be cultivated in learners. Aware that it may be seen as redolent of the arbitrary ‘bag of virtues’ approach disparaged by Lawrence Kohlberg vis-à-vis moral education,⁵⁴² I provide here a suitable health warning. I do not claim that this scheme is exhaustive or necessary: it is merely illustrative. The virtues are drawn mainly from Aristotle and Zagzebski. In common with De La Salle/Agathon, the virtues of wisdom, prudence, gentleness and charity feature prominently amongst what I have categorised as the over-arching virtues of a teacher, in the form of *phronēsis*⁵⁴³, *sōphrosynē*, *praotēs* and *philanthropia* respectively.

Teacherly Epistemic Virtues

It should be stressed that there cannot be a hard and fast system of learner-virtues to be developed, together with complementary teacher-virtues to support these desiderata. Rather than forming the basis of a strict algorithm, or a *technē*, the table merely shows some possible ways in which the teacher, guided by the overarching teacherly intellectual and moral virtues of *phronēsis*⁵⁴⁴ and *philanthropia* (and using the attunement of *sungnōmē*), might respond to the learner’s epistemic predicament. It is not the only way of categorising the epistemic virtues. Indeed, grouping the virtues in any strict taxonomy disguises their highly interconnected nature, for virtue cannot be carved at the joints so neatly. However, if the teacher is animated by the right virtue in the right way for the right reason, the interlocking of teacherly and learner virtues may lead to successful, virtuous and pleasurable uptake by the learner. Perhaps the main use of this table, though, is to illustrate the variety of ways in which the virtues can support each other across the teacher-learner dyad. It also hints at possible mirages, in which the learner’s apparent epistemic achievements only reflect a simulacrum of the intended virtuous engagements. For example, a pupil may depend upon his *Cliff*

⁵⁴² Kohlberg says, ‘I have criticized the “bag of virtues” concept of moral education on the grounds, first, that there are no such things and, second, if there were, they couldn’t be taught.’ Lawrence Kohlberg (1981) *Essays in Moral Development 1* p.29-. Quoted in Douglas C. Langston, *Conscience and other virtues: from Bonaventure to MacIntyre* (Pennsylvania: The Pennsylvania State University) p.38. [Echoing, according to Langston, Plato’s/Socrates’ claim that we do not know what virtue is and that it cannot be taught. Langston also explains that promoting the ‘bag’ might become indoctrination if there is no critical element in its use. (p.172)].

⁵⁴³ The match between Aristotle’s *phronēsis* and De la Salle/Agathon’s wisdom (Wisdom is a virtue which gives us knowledge of the most exalted things through the most excellent principles so that we may act accordingly) is not perfect. Indeed, Agathon claims that, ‘There is another kind of wisdom which does not come down from on high, but on the contrary is earthly, animal, diabolical ... it adopts exclusively the maxims of the world, while rejecting those of the Gospel.’ This seems to have more in common with Aristotle’s cleverness [*deinotēs*], which can be used for good or ill.

⁵⁴⁴ Aristotle, *Nicomachean Ethics*, bk.VI, 5, 1140b4.

*Notes*⁵⁴⁵ or the teacher's 'definitive' reading of *Macbeth* (thereby exercising 'proper trust of authority outside [one's] area of expertise'), instead of responding to the play in a less compliant way (by using the '... ability to think up illuminating ... interpretations of literary texts'). The over-helpful teacher or secondary text may interfere with the pupil's authentic engagement with the primary text in this case.

An Example: The Social Epistemic Virtues

If we look a little more closely at one of my categories of epistemic virtue, we can see how the interlocking of learner-virtues with teacher-virtues might work beneficially. In its concisely-stated form, Appendix B is not particularly revealing, so I shall take one set of virtues (of the five sets presented there) and elaborate upon it. A similar exercise could have been undertaken with any other of the virtue sets.

Under the heading 'The Social Epistemic Virtues', our desire is that the learner develops the virtues which would enable him to act as a socially-located epistemic agent. This would involve his cultivating the dispositions both to 'receive others' say-so'⁵⁴⁶ and to 'be truthful when [he] tell[s] other people what is what'.⁵⁴⁷ Furthermore, rather than indulging in an undisciplined *parrhesia*, we wish him to combine a default intellectual candour with 'knowing [his] audience and how they respond'.⁵⁴⁸ When he receives testimony, we would like him to be animated by the virtue of 'reflexive critical openness', a virtue which enables [him] to avoid 'epistemic injustice – that is, failing to believe people when they ought to be believed, but also believing someone who ought not to be believed'.⁵⁴⁹ So he evaluates the arguments of his interlocutors (or, perhaps, the extended testimony of a web-site) fairly, while displaying 'Proper trust of authority outside [his] area of expertise'.⁵⁵⁰

⁵⁴⁵ Even worse, he may find a ready-made essay about 'This dead butcher and his fiend-like queen' at <http://www.echeat.com/essay.php?t=33333> [Accessed 19 Sep 2010].

⁵⁴⁶ Sosa (2007) op. cit., p.95.

⁵⁴⁷ Thomas Reid (1764) *An Enquiry*, in Michael Welbourne (2002) Is Hume really a reductivist? *Stud. Hist. Phil. Sci.*, 33, p.419.

⁵⁴⁸ Zagzebski, *VOM*, p.114.

⁵⁴⁹ Miranda Fricker (n.d) in S.E. Marshall (2003) Epistemic Injustice: The Third Way? *Metaphilosophy*, vol.34, nos.1/2, p.176.

⁵⁵⁰ Zagzebski, *VOM*, p.319.

Having set out the learner-virtues to be cultivated under the heading ‘The Social Epistemic Virtues’, we turn next to the tallying teacher virtues which will tend to support such cultivation.

First of all, it is worth remembering that many teachers are experienced in public intellectual discussion, while learners – even adult learners – typically are not. So to develop the social epistemic virtues, a measure of sensitivity and supportiveness will be desirable: attributes linked more strongly to the moral virtues than to the epistemic. Thus, *praotēs* (gentleness, good nature, patience)⁵⁵¹, *eleutheriotēs* (liberality, generosity)⁵⁵² and intellectual charity are the default teacherly dispositions here. On the other hand, by acting with solicitude in determining our students’ epistemic predicaments, we might feel that on certain occasions a Socratic ‘provocativeness’⁵⁵³ is in order (particularly for the more bumptious students), so we use our sense of *eukairos* to make our *elenctic* interventions in a timely way. Throughout these occasions of learning, we do well to bear in mind that our students, as informal anthropologists, are taking note not just of our espoused views, but also of how we comport ourselves morally and intellectually. Too brusque a dismissal of a learner’s half-formed opinions is thus not a suitable action for a teacher who aspires to *Vorleben* – a willingness to act as an emulable role-model. A more worthy approach is for her to receive the flawed or inchoate views respectfully, and then find courteous ways of alerting their bearer to any problems she has identified, in order that he may recognise these for himself. This of course takes more time than simply telling the learner what we feel he needs to know, but if there is a genuine desire to develop the social intellectual virtues, it would be time well spent.

By behaving in ways animated by the teacherly virtues outlined, the teacher is not only encouraging the development of the learner’s epistemic virtues, she is also enabling him to acquire knowledge. In modelling and supporting the virtue of ‘reflexive critical openness’ for the student, she encourages him to acquire knowledge via the testimony of others in an epistemically-virtuous way. Furthermore, by acting with ‘provocativeness’, the teacher forces a consideration of the contrary propositions $\sim p$ and their corollaries: an intellectual activity on the part of the learner which

⁵⁵¹ J.A.K. Thompson and Hugh Tredennick (1953, 2004) [trs.] *Aristotle: The Nicomachean Ethics* (London: Penguin Books) p.312.

⁵⁵² Thompson & Tredennick (1953, 2004) op. cit., p.311.

⁵⁵³ Plato, *Republic*, 523b-c.

corresponds either to the rippling derogation of $\sim p$ and its close implications throughout the learner's doxastic web, or to a replacement of p by $\sim p$ should the challenge be irresistible.

Since classroom time is not unlimited, a judgement needs to be made that trades off the time spent on specific intellectual virtues with the time devoted to others in the suite, and to the knowledge which is to be acquired. To legislate between the competing desiderata, the teacher ought to be animated by the Aristotelian virtue of *phronēsis*, so that a virtuous compromise may be reached.

Teacherly Virtues as Means Between Extremes

This, in turn, relies on the Aristotelian doctrine of the mean, in which a virtue is seen as the *juste milieu* between two vicious extremes: one the vice of excess and the other, the vice of deficit. There is thus a virtuous mean for truth-telling, between the excess of unremitting *parrhesia* and the deficit of sullen taciturnity. That is not to say that the extremes never represent appropriate pedagogical action, however. We can draw here on Shapin's principle, which we met in Chapter 2, that for each epistemic maxim, there is a counter-maxim. So, the maxim that the teacher's first duty is to Teach enthusiastically (with a capital 'T') has the counter-maxim that this may overload the learner epistemically, and so silence may be best. Thus, as teachers we can choose to adopt a testimonial role anywhere up to, and including, the two tropes of (i) the garrulous expert, enthusing about her specialist field and (ii) the silent guru, who sends the disciple away to find out for himself. However, were we to embody one of these styles exclusively, it would represent a diachronous epistemic vice. So, over time, the amount of Teaching needs to be finely judged to avoid both what we might characterise as *hyperparrhesia* and epistemic silence. As we saw earlier (p.137), there is also the possibility of leavening our truth-telling with some pedagogically-justified misinformation, which either sacrifices the immediate truth for a longer-range truth, or alerts the learner to the dangers of credulity. During the times that the teacher is not engaging in sincere testimony, the other teacherly virtues find application. These non-testimonial, other-regarding epistemic virtues encourage such desiderata as enquiry, scholarship, creativity and the social epistemic virtues in the learner, as we see in the table in Appendix B.

A similar move can be made with respect to each of the other groups of epistemic virtues. So an excess of the teacherly virtues which encourage, say, enquiry on the part of the learner, may lead to an over-emphasis on pure discovery learning and hence also be vicious in its neglect of testimony, scholarship and so on. The learner may follow many blind alleys when left to his own devices. Too much content-free encouraging (being ‘the guide on the side’) is as undesirable as too much telling (that is, acting as ‘the sage on the stage’) and it is by cultivating situational, *skopie* and teleological awareness that the teacher is able to act in accordance with *phronēsis* to judge the virtuous mean for a given concrete learning situation. Hitting this desirable spot involves developing all of the learners’ epistemic virtues in a balanced way. Thus, the virtues I have grouped under categories associated with ‘doxastic trust’, ‘enquiry’, ‘creativity’, ‘scholarship’ and ‘the social epistemic virtues’ ought to be cultivated equitably, with none being allowed to atrophy by neglect. It is by habituation that the virtues are developed, so learners should be encouraged to practise all of the intellectual virtues. Here, I stress, there is no simple algorithm or *technē* which can reliably tell the teacher which epistemic virtue ought to be fostered in learners at any given time: attunement to the particulars and *phronēsis* are indispensable.

In closing this section on the educational implications of the responsibilist variety of virtue epistemology, it is worth heeding Zagzebski’s plea for ‘understanding’ to be rehabilitated as an epistemic goal. We look in vain for it, or the related *desideratum* of wisdom, in lists of learning outcomes – indeed, as we shall see in a little while, some would even outlaw the use of the term in educational settings. Zagzebski quotes from Locke’s ‘Epistle to the Reader’, which opens his *Essay Concerning Human Understanding*, and since this links nicely with my earlier discussion of Aristotle’s ‘delight’ criterion of virtue (p.230), I too shall quote directly from Locke:

... he is little acquainted with the subject of this treatise, the UNDERSTANDING, who does not know, that as it is the most elevated part of the soul, so it is employed with a greater, and more constant delight, than any of the other. Its searches after truth, are a sort of hunting and hawking, wherein the very pursuit makes a great part of the pleasure ... every moment of his pursuit, will reward his pains with some delight; and he will have reason to think his time not ill spent, even when he cannot boast much of any greater acquisition.⁵⁵⁴

This is a more generous conception of worthwhile epistemic goals than the rather pinched contemporary notion of the learner as a collector of propositions to be later

⁵⁵⁴ John Locke (1706) *An Essay Concerning Human Understanding* (London: Penguin Books, 1997) p.7.

presented as evidence of learning. Locke asserts that this hunter, ‘who has raised himself above the alms-basket, and [is] not content to live lazily on scraps of begged opinion’,⁵⁵⁵ will thereby experience a greater satisfaction. With the caveat that, as we have seen, Locke is unduly negative towards testimony, it seems as if this active, engaged, pleasurable enquiry is a route to understanding. The intellectual engagement that Locke promotes will, we hope, create a more coherent and wide-ranging epistemic web for the learner, by the virtuous accession, modification and derogation of propositional and other types of knowledge. Coherence is needed for understanding, while correspondence can be enough for knowledge. To understand *p* is to be able to accommodate it into his web of belief by means of the construction of suitable linkages to form a coherent whole.

Conclusions of Chapter 5

A neo-Aristotelian construal of epistemic virtue has many lessons for education. By developing the insights of Zagzebski and others, we see the learner as an enwebbed epistemic agent who acts from intellectual virtue to revise his beliefs virtuously, and thus comes into closer cognitive contact with reality. The teacher is viewed as a benevolent epistemic agent who uses testimony, open-mindedness and the rest of the epistemic virtues to enable the learner to enhance both his knowledge and his intellectual virtue – thereby helping him to flourish intellectually. She acts in this project as a knower, as a bearer of other-regarding epistemic virtue, and as a worthy role-model. In constructing a list of the epistemic virtues to be cultivated in the learner, and the co-ordinate virtues which the teacher might draw upon to support such cultivation, it has turned out that the teacher’s moral virtues are indispensable (for example, those of benevolence and patience). Any theoretical barrier we might erect between the epistemic and the moral virtues is thus to be considered permeable, at least in the case of the teacher’s other-regarding virtues.

⁵⁵⁵ *ibid*, p.7.

Chapter 6 - Implications of Virtue Epistemology for Educational Practice

Virtue epistemology has been shown to be capable of rehabilitating epistemology as a fitting contributor to educational discourse and practice. It has been revealed throughout this thesis to be a productive seam which can benefit educational thinking and which in turn profits from an engagement with the field of education.

This is largely a work of positive educational epistemology, which regards as foundational the assertion that it is possible to achieve knowledge. It examined the conditions under which such an achievement can take place, with a view to illuminating educational thinking. The first three chapters consisted largely of exposition on, and further development of, key themes in virtue epistemology, with a strong focus on the associated topics of testimony and other-regarding epistemic virtue. Chapters 4 and 5 attempted to cash in the promissory note of the introduction – that virtue epistemology is capable of enriching educational discourse – by considering the educational implications of the reliabilist and responsibilist varieties of the new field. In this concluding chapter, we shall draw the main themes together and consider some further implications for educational practice.

Once the gap between true belief and knowledge was opened up, and we took seriously Socrates' uncharacteristically strong claim that 'knowledge is more honourable and excellent than true opinion',⁵⁵⁶ the conditions for *knowledge*-acquisition (as opposed to the less valuable activity of forming mere *true beliefs*) were shown plausibly to include epistemic virtue – particularly where Sosa's 'reflective knowledge' is concerned. That the cultivation of the epistemic virtues, and the growth of knowledge which these help to take place, ought to be a key component of the educational project was demonstrated at length. The overall task of this thesis was to expand, develop and deploy the resources of virtue epistemology to test whether it might provide an explanation of what knowledge consists in, how learners might flourish intellectually, and how the teacher can support this flourishing. Carrying out this work did demonstrate that an

⁵⁵⁶ Plato, *Meno*, 98, 4.

extended conversation between virtue epistemology and education concerning these matters advances their shared interests, and has thus made a modest contribution to knowledge.

We saw that the epistemic virtues are important if the learner is to acquire knowledge, particularly if we wish him to go further than Sosa's 'animal knowledge', and that being animated by such virtues is vital for his intellectual flourishing. Because virtue epistemology is concerned with the virtuous motivation for, and the aetiology and proper maintenance of, concept-webs, and not merely with apparent evidence of their possession, a pedagogy influenced by it will be a more exacting model for teachers to match up to than some rival versions. By exemplifying the self-regarding intellectual virtues and exercising her other-regarding virtues, the teacher can help the learner both to cultivate his own epistemic virtues and to acquire genuine knowledge. Furthermore, before responding to the learner's epistemic predicament, she should bring into play her attunement towards him to synchronise her suitable 'tallying' other-regarding virtues, in order to support the intellectual virtues that she wishes to foster in him on that occasion. This sensitive co-ordinating process helps the learner both to cultivate his epistemic virtues and to acquire knowledge. Because of the attunement, judgement and choice between competing virtues required of the teacher, this is a role for a *phronimos* engaged in a *praxis*, who is animated by *phronēsis* to act virtuously for the good of others in a social setting. There is an inescapable degree of unpredictability surrounding such action – unlike the strict conformity to a plan (*eidos*) that the rival *technē-poiēsis* paradigm requires – but the recurrent interplay between other-regarding virtue and other-regarding epistemic acts, in which the *skopoi* can change, is the best way of assisting the learner to acquire genuine knowledge and flourish intellectually. This places demands on the teacher, who must develop her own excellences characteristic of the intellectual good life, and be willing and able to exercise them with *sungnōmē* in order to be beneficial to her students in this way, but the rewards are worthwhile. She wants for her students the epistemic goods for which she herself has an appetite, so while her medium-term ambition for them vis-à-vis knowledge is the demanding one of 'sensitivity', her long-range intellectual *telos* for students is 'safety': a property that can only genuinely come with the passage of time and experience. Furthermore, the learner ought to be supported by the teacher to develop his own

phronēsis in the context of his participation in the *praxis* that defines the subject. This again is a long-term project, one which the teacher can help to inaugurate and foster.

We also developed an exigent model of knowledge, which required the use of the intellectual virtues to bring the learner's web into better congruence with reality. This stressed the importance of considering the counterfactive class, $\sim p$; for, without such engagement, the learner's doxastic web is like Socrates' aviary of incoherent, untethered propositions. Using ideas from AI theory, we found that once p is accepted as true, $\sim p$ and its implications ought to be removed from the learner's web; and that p requires learning with adequate input credibility – and hence epistemic entrenchment – to enable a defence against future epistemic input that might imply $\sim p$ to be true. Sosa's notion of aptness (accuracy because adroit) also demands the use of intellectual virtue, and builds into the concept of knowledge the notion of credit due to the learner for his epistemic performance. For Sosa though, this epistemic performance might be nothing more than the exercising of good colour vision: not an epistemic virtue on Zagzebski's reading. 'Reflective knowledge' is of a higher grade, however (and will need more expansive intellectual virtues), because the learner not only knows that p , but has an epistemic perspective on this knowing and thus has better epistemically entrenched beliefs, of a more admirable type. These more challenging construals of learning and knowledge that we elaborated upon from the reliabilist perspective, are superior to simplistic and reductionist alternatives, and will require a more responsive pedagogy.

Given its virtue turn, epistemology is now not only equipped to engage productively with education in general, it is also able – pursuing here a sub-theme – to provide a principled challenge to some of the worst excesses of village technicism in education: excesses that could easily lead the learner to *Halbbildung*. Here we might concur broadly with Richard Paul, who says that 'the present structure of curricula and teaching not only strongly discourages [the intellectual virtues'] development but also strongly encourages their opposite. Consequently even the "best" students enter and leave college as largely mis-educated persons...'⁵⁵⁷

⁵⁵⁷ Richard Paul (1993) *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*, pp.319-332 (Sonoma: Foundation for Critical Thinking) reprinted as ch.13, Guy Axtell (ed) (2000) *Knowledge, Belief and Character* (Lanham, Maryland: Rowman & Littlefield), p.164.

A booklet endorsed by the Irish Higher Education Authority and funded by the National Development Plan as a contribution to the Bologna Process illustrates the nature of some of the thinking in this area: reductionist assumptions which our educational virtue epistemology can censure and replace with more demanding alternatives. In the glossary, ‘knowledge’ is defined as ‘The ability to recall or remember facts without necessarily understanding them’.⁵⁵⁸ Lest we should think that there is room elsewhere for understanding, the advice on constructing learning outcomes includes: ‘Avoid vague terms like ... understand ...’.⁵⁵⁹ The pervasive rhetoric is that learning outcomes should be clear and – above all – demonstrable, and that knowledge and understanding are mere chimeras. We might allow that the mission of technicism in education was originally well-intentioned – to rescue teaching from what it saw as sloppy and ineffective practices by putting it on a rational footing – but we see here that it has over-reached itself and sought to impose an impoverished view of knowledge that is detrimental to education.

The casualty in this campaign of emphasis on narrowly-conceived ‘learning outcomes’ is the student who learns to be insincere and only apparently to deliver outcomes such as these, for to him these have value only inasmuch as they lead to reward, not for their own sake. As a strategy for the learner, it is eminently rational, but the acquisition of ersatz ‘knowledge’ – in which the knowledge is neither legitimately owned nor appreciated authentically save only as fungible means to an end – is not intellectually virtuous. Although we might allow that knowledge-acquisition is possible without the use of intellectual virtue (in Zagzebski’s thicker sense of these, at any rate) his untethered, unvirtuous acquisition of a true propositional belief provides the learner neither with the resources to carry out a defence of the proposition in the light of *prima facie* evidence showing the belief to be faulty, nor with a rationale for virtuous belief revision should it be seen that the proposition ought to be derogated.

So this simulacrum of a virtuous belief is not properly enwebbed with the rest of the learner’s knowledge but sits in isolation, or perhaps in the company of other ‘academic’ knowledge (the word ‘academic’ here becoming a pejorative one). The system that has brought about this alienation is flawed, ironically, by being too systematic: too

⁵⁵⁸ Declan Kennedy (2007) *Writing and Using Learning Outcomes* (Cork: University College Cork) p.78.

⁵⁵⁹ *ibid.*, p.43.

concerned with inputs and outputs; too nakedly results-driven. Students should be discouraged from seeing learning as merely a tiresome way of achieving the desired end of knowledge – the *Bildungsphilister's* view – and regard it instead as a life-enhancing activity with its own internal goods. This hinges on the difference between learning as a *technē* (whose associated activity, *poiēsis*, ought rationally to be minimised, since the *poiēmata* are all that matter) and learning as a *praxis*: a worthwhile activity in its own right as well as a way of acquiring knowledge.

But while knowledge as *poiēma* is valorised, a number of undesirable consequences will follow, the most extreme being plagiarism: a growing phenomenon that virtue epistemology shows to be vicious, hence non-creditworthy, since the true beliefs were not acquired thanks to epistemic skills and faculties but by means of doxastic shortcuts. Plagiarised ‘knowledge’ is not ‘apt’, to use Sosa’s term (i.e., the epistemic agent’s apparent doxastic success is not due to his intellectual skill and hence is not creditable to him). In the worst cases, not even the Zagzebskian virtue of ‘recognizing reliable testimony’ is animating the student, for he perhaps merely appropriates the first offerings from an online search engine, uses little in the way of discriminatory powers, and engages with the text only to the extent of altering the fonts and removing any US spelling and obvious hyperlinks. Not only are counterfactuals, $\sim p$, not considered (together with any consequent derogation of linked propositions), even the substantive proposition, p , is not properly entertained and is thereby not given its rightful place in the belief-web of the student. He is thus alienated from the ‘knowledge’ he claims to possess.

One might object that using virtue epistemology to show the act of plagiarising to be wrong is to use a sophisticated steam-roller to crack a nut which is easily opened by other means. The village technician, for example, would view the student’s behaviour as both immoral and a threat to the reliability of his systems; the virtue ethicist would see such cheating as inimical to the learner’s flourishing. This would be to misunderstand the aetiology of plagiarism, however. If the student receives the pervasive message that outcomes are what count – rather than intellectual virtue, engagement, knowledge, understanding or enwebbedness – he will rationally and efficiently furnish such apparent outcomes. Once the village technician’s pernicious definition of ‘knowledge’ as the ‘ability to recall or remember facts without

necessarily understanding them'⁵⁶⁰ achieves currency, it is no surprise that learners start to act in accordance with it. If the sources happen to be credible, the use of plagiarised text is a reliable route to apparent, demonstrated knowledge, in the sense of espousing true 'beliefs' – even if the putative beliefs are not authentically entertained but are merely conveyed untouched to the one assessing them. Repugnant as this is, the learner's actions can be seen not only as rational but also as honouring business principles such as efficiency, outsourcing and the use of initiative. But the technician fails to see his definition of knowledge as the root of the problem and proposes technical solutions in response to the students' cheating. There follows a technical escalation of plagiarism-detecting software pitted against more and more sophisticated ways of evading exposure. If, on the other hand, a culture of intellectual virtue is fostered, rather than what Lyotard terms 'performativity',⁵⁶¹ engendered by a crude technician narrative, there is a greater prospect for a more authentic engagement with knowledge. The issues around plagiarism are epistemic and ethical, not technical, but it is the technician's definition that prepares the ground for the epistemically-vicious activity of some students. The problems begin when students take the technician at his word and accept an inadequate definition of 'knowledge'. Our definition of knowledge, following Nozick, is a more stringent and demanding one, requiring not only that p be true, but also that: the student believes p ; were it not to be true, he wouldn't have believed it; and were it still to be true but the circumstances changed, he would still believe it. This 'subjunctive' view of knowledge considers epistemic causation and not just the target belief, thereby requiring epistemically-virtuous epistemic action. Such a level of stringency may sometime be asking too much – and we might concede that knowledge does not always require intellectual virtue – but nevertheless it is a construal to which we ought to aspire.

Even if the learner's response to the technician's framework does not extend as far as plagiarism, there may well be some doxastic insincerity vis-à-vis the propositions he purports to know. Students in Ireland talk of 'learning-off' a topic for an examination, a process that typically includes the memorising of standard answers to predicted questions. Knowing (in the virtue-epistemic sense), believing or understanding are not

⁵⁶⁰ Kennedy (2007) op. cit., p.78.

⁵⁶¹ Jean-François Lyotard writes of a language game 'in which the goal is no longer truth, but performativity – that is, the best possible input/output equation'. J-F Lyotard (1979) [tr. G. Bennington and B. Massumi. (1984)] *The Postmodern Condition: A Report on Knowledge* (Manchester: Manchester University Press) p.46.

required: performance is all. Indeed, any virtuous engagement with knowledge might be harmful to the candidate's prospects, so is avoided in favour of the industrious adsorption⁵⁶² of tried and tested propositions and algorithms. To cater to this strategy, in Ireland there are a number of 'grind schools',⁵⁶³ whose sole pedagogical ambition is to coach teenage candidates to achieve the highest possible points in the Leaving Certificate examination. As *The Irish Times* puts it, 'An Easter journey to the local grind school has become the norm for diligent exam students at the expense of their parents who are prepared to pay upwards of €800 for an intensive crash course'.⁵⁶⁴ And, under a village technicianist construal, it works: '... yet again ... so-called grind schools and fee-paying schools dominate the league tables, as students strive to gain higher points for college entry'.⁵⁶⁵ The fee is thus a 'clear investment', according to the Principal of Dublin's biggest grind school, The Institute of Education. Here we see education being cynically construed as a shrewd investment strategy that buys advantage in a competitive career market: an instance of what Adorno calls *Halbbildung*. It seems inevitable that such a tightly-focused project will provide the student with much that does not meet the criteria we have developed for knowledge – being neither sensitive, well-tethered nor apt.

Having discussed some of the negative effects of inadequate conceptions of what it is to know, we return to virtue epistemology for a summary of a more nuanced view of knowledge, teaching and learning. Here, I shall reprise the main themes of the earlier chapters and set these in educational contexts. The sections here are 'Virtue Reliabilism', 'Virtue Responsibilism' and 'Virtuous Testimony'. There follows an exploration of how teachers ought to act – qua other-regarding epistemic (and, inescapably, moral) agents – and how learners ought to act as developing epistemic agents. I end by outlining some other important implications of virtue epistemology for educational practice.

⁵⁶² During chemical 'adsorption' the new substance is not incorporated into the substrate (as in the case of 'absorption') but only forms a surface film. Here, I use the word as a metaphor for the process of 'learning-off' for an exam. The epistemic input, *p*, is not absorbed into the learner's web – with the attendant derogation of incompatible propositions $\sim p$, and interlinking to other parts of the web – but is deposited only at a surface level, with a limited permanence, fit only for the *skopos* purpose of imminent examination recall.

⁵⁶³ The link to Thomas Gradgrind in Dickens' *Hard Times* is an obvious one, but there seems to be no documented etymological connection.

⁵⁶⁴ Áine Kerr (2006) *The Irish Times*, March 4.

⁵⁶⁵ Katherine Donnelly (2007) *Irish Independent*, November 22.

Virtue Reliabilism and Education

Sosa's reliabilism and Zagzebski's responsibilism are the two major kinds of present-day virtue epistemology. We recall that both, as agent-focused epistemologies, reverse the direction of analysis characteristic of traditional belief-based epistemologies, to view knowledge as true belief acquired by cognitive agents via acts of cognitive virtue (instead of true belief to which a decontextualised knower ought to assent because of certain attributes of the beliefs themselves).

In analysing Sosa's faculty reliabilism, a consideration of Nozick's legacy led to the inference that counterfactual subjunctive conditionals are one key to understanding this type of virtue epistemology. When this was parlayed to the educational context, a conclusion emerged that simply requiring learners to aim unambiguously at clearly-defined epistemic targets will, in the long run, fall short of a sustainable doxastic process. Notwithstanding the necessity of learners acquiring some unexamined true beliefs, myths and habits early in life (or early in their exploration of a new field) as matters of faith, there is a clear imperative later to consider propositions other than those in their immediate sights. Thus, any list of propositions, such as may be found in a syllabus or set of learning outcomes, comprises only a fraction of the real doxastic task if their acquisition is to represent anything more than *Halbbildung*.

Sosa's notion of reflective knowledge (K^+), or 'apt belief aptly noted' ($K_s K_s p$),⁵⁶⁶ encourages a more wide-angled view than the telescopic sight aimed at the individual propositional target. The learner must consider features beyond the proposition itself and so attain some degree of perspective on his knowing, in order to see how the proposition in question may be either defended or derogated in the face of recalcitrant epistemic input. This amounts essentially to the same requirement as Socrates' 'tethering'. The learner needs not only to have an apt belief that p (that is, a belief the success of which is due to the skill manifested), he must also have an apt belief that his knowing p is defensible against pertinent doubts. I extended Sosa's thinking in this area by suggesting that the chief doubts which may arise are the result of entertaining the counterfactive class of propositions, $\sim p$. Sosa himself, employing (in his 2011 the

⁵⁶⁶ Sosa (2007) op. cit., p.32.

the counterfactive class of propositions, $\sim p$. Sosa himself, employing (in his 2011 book) the metaphor of Diana the huntress either deciding or forbearing to take a shot, is coming back to the notion of entertaining propositions other than p : a welcome return to the consideration of $\sim p$ that his previous sidelining of ‘sensitivity’ underplayed.

Built into Sosa’s variety of virtue epistemology is the concept of desert, or credit for knowledge acquired virtuously. To him, the learner can only justly claim to have knowledge when he uses his epistemic skills and faculties to obtain the truth, such that he can take credit for so doing. Sosa’s notion of ‘aptness’ signifies ‘accurate because adroit’ – other words the effort we are praising the learner for is the intellectual action that caused the knowledge-acquisition. Although it is too strong a thesis to claim that knowledge always requires intellectual virtue, his requirement of desert maps well onto educational thinking and rules out certain activities which may involve the acquisition of true beliefs, but which we nevertheless intuit as being undeserving of credit. Conversely, the acquisition of higher-grade knowledge, K^+ , demands our extra approbation. Such judgements require a form of epistemic justice, in that we attribute knowledge correctly to those who have it and not to those who do not. Just as ‘knowledge+’ in the learner is particularly worthy of our approval, true, apparent beliefs which *are* ‘demonstrated’ (in the terminology of learning outcomes) but do not either represent virtuous intellectual activity or reflect the learner’s actual web of beliefs, can sometimes be considered reprehensible.

Sosa’s criterion of ‘aptness’ demands a more authentic, epistemically-virtuous grappling with knowledge than the technician requires – his ‘reflective knowledge’ to an even greater extent. This is thus an improvement both on simplistic definitions such as Kennedy’s (p.253) and on the crude operationalising in the grind schools of a view of knowledge as no more than that which scores points on the Leaving Certificate. However, rather than using Sosa’s reliabilist designation of epistemic virtue as, ‘... a quality bound to help maximise one’s surplus of truth over error’,⁵⁶⁷ we might prefer the learner to act from what we could term ‘Quinean epistemic virtue’ (and define it as ‘that which leads to a better web of belief’), or a Zagzebskian ‘that which leads to greater cognitive contact with reality’. These alternatives de-emphasise the importance of individual true or false proposition p . They both also enhance the role of counterfactuals, $\sim p$, accommodate Sosa’s higher-level ‘reflective knowledge’ (K^+) and

⁵⁶⁷ Ernest Sosa (1985) ‘Knowledge and Intellectual Virtue’, *Monist*, 68, no.2 (April) p.227.

thus, contra Kennedy, promote understanding as a desirable epistemic goal. Nevertheless, there are certain individual propositions (some of which treat of ‘threshold concepts’ [p.153]), which ought to be carefully accentuated by the teacher in a timely manner, because of their property of opening up the doxastic possibilities for the learner and thus being conducive to his intellectual flourishing. Having said this, we see that it is not in adding to the stockpile of facts (or ‘surplus of truth over error’) that their value lies, but in their clearing the way for new sections of the learner’s web to be constructed.

We might also question Sosa’s claim that epistemic virtue resides in eyes, ears, memory and so on, and suggest instead that it is in how these faculties are used, and what steps are taken to compensate for their imperfections, that virtue is exhibited. Drawing parallels with moral act evaluation, in which ‘ought’ implies ‘can’, academic approval should be directed to a greater extent towards truth-seeking *activities* and *dispositions* rather than only towards the *states of belief* which result from these. It is in the *use* of his faculties that credit (or discredit, or non-credit) accrues to the user. This means, for instance, that pupils with special educational needs still deserve epistemic credit for virtuously using their cognitive endowments, even if the resultant epistemic achievements are not so high.

Moreover, in an educational organisation, the onus is on those in a stronger epistemic position (that is, the teachers) to help those who are weaker. This does not seem initially to apply as compellingly to students helping their peers, though, for doing so in a competitive educational environment weakens their relative position by helping others to catch up, and so offends against prudence (in the sense of shrewd self-interest). It is, however, the other-regardingly epistemically-virtuous thing to do, and the blame for promoting the alternative lies with the traditional educational rules of engagement. A more collegial approach would emphasise the socially-enwebbed nature of knowledge and downplay the prominence of the putatively autonomous knower. It would also promote the intellectual flourishing both of the epistemic beneficiary and of his benefactor. The relationship between desert and achievement is not as clear-cut as we might initially think, once the undeserved nature of propitious or unfavourable intellectual endowments is raised; to discern epistemic justice, therefore, requires attunement on the part of the teacher.

Virtue Responsibilism and Education

Zagzebski's responsibilism takes intellectual virtue to be an indispensable means of acquiring 'knowledge', or, as she puts it, '... a state of cognitive contact with reality arising out of acts of intellectual virtue'.⁵⁶⁸ We might feel that her indispensability thesis is too strong, but nevertheless still argue that the educational project requires that our learners cultivate the epistemic virtues in order that they may enhance their intellectual alignment with the world. Part of Zagzebski's project was to assimilate the epistemic virtues to the moral, a move I resisted for the sake of conceptual clarity. However, because it is directed towards one of the three great transcendentals,⁵⁶⁹ the pursuit of truth is a key part of a flourishing life: so in a wider sense we can see it as joined to the striving towards the good life that Aristotelian *moral* virtue presupposes.⁵⁷⁰ Zagzebski does not argue in this way, however. Instead of claiming that their ultimate aim is eudaimonia, she attempts to unify the virtues at the level of motivation by suggesting that lying beneath all of them – both the intellectual and the moral – is 'a love of being in general' (*VOM*, p.167). Notwithstanding these unifying moves, it is still useful to consider the intermediate aim of the virtues, and in the case of the intellectual category of these, knowledge, understanding and wisdom are the targets.

A wide range of epistemic virtues is desirable in animating both teacher and learner and orientating them towards these intellectual goods, for any undue emphasis on a subset of these will have a distorting effect on teaching and learning. Zagzebski provides a thick account of the intellectual virtues, and her naming and describing a number of these was helpful in my co-ordinating them between learner and teacher in the last chapter (and in Appendix B). An important instance of this – although certainly not to be regarded as the only one – is the key teacherly virtue of giving helpful testimony:

⁵⁶⁸ Zagzebski (1996) *VOM*, p.298 [bold face in original].

⁵⁶⁹ Interestingly, while Aristotle treats truth and goodness as transcendentals, 'Nowhere ... does Aristotle discuss beauty as a transcendental property'. Daniel Gallagher (2006) 'The Platonic-Aristotelian Hybridity of Aquinas's Aesthetic Theory', *Hortulus*, vol.2, no.1, p.2. However, in *NE* bk.2, Aristotle criticizes the *agroikos* – the 'person of undeveloped taste and appreciation' (footnote to 1104a24) – so the pursuit of beauty is not un-Aristotelian. Jonathan Barnes (2003) op. cit., p.34

⁵⁷⁰ Interestingly, while Aristotle treats truth and goodness as transcendentals, 'Nowhere ... does Aristotle discuss beauty as a transcendental property'. Daniel Gallagher (2006) 'The Platonic-Aristotelian Hybridity of Aquinas's Aesthetic Theory', *Hortulus*, vol.2, no.1, p.2. However, in *NE* bk.2, Aristotle criticizes the *agroikos* – the 'person of undeveloped taste and appreciation' (footnote to 1104a24) – so the pursuit of beauty is not un-Aristotelian. Jonathan Barnes (2003) op. cit., p.34

Reid's 'propensity to be truthful when we tell other people what is what',⁵⁷¹ to which we turn next.

Virtuous Testimony and Education

Important day-to-day epistemic virtues for the teacher include a beneficent disposition to give good testimony to her pupils. We need to be alert to the temptation to overdo this, however, since 'it is possible to talk too much: so as to pollute the dialectical space'.⁵⁷² The teacher who indulges in a non-stop monologue, comprised of an indiscriminate mixture of important and trivial propositions, administrative instructions, reprimands, hints and tips, may simply confuse the learner. Moreover, as we have seen, 'good testimony' is not to be conflated with simple truth-telling – though sincere testifying ought to be a default tendency – but should involve a teacherly willingness to discern and help alleviate the epistemic predicament of the learner, together with an open-minded personal enwebbedness in her subject-discipline(s). In this sense, good testimony is a virtuous mediation between an evolving discipline and the doxastic needs of the student. The extent to which the unsettled nature of the discipline is honoured will depend on the phase of education and the positioning of the student within the discipline, in that advanced postgraduate students ought arguably to engage more with emerging, tentative knowledge, and younger primary pupils with knowledge of a less contested type. This is not an absolute prescription, however, for some debates are accessible – in a simplified form – to even the most junior learners.

The formal learning situation is a peculiar context in that it is one of the few situations in everyday life where the auditor may know little or nothing apropos the subject matter about which testimony is being given. In this doxastic setting, the teacher can insist on Coady's acceptance principle being in force (p.87), for the learner has no way of knowing if the testimony is trustworthy or not. It is better, however, if the teacher can assist the learner in rationally and affectively bridging the gap between her new testimony and his previous experience and belief-web, so that he is able to assess its plausibility for himself. To do so will require the teacher to have insight both into her students' webs of belief and into the current state of development of their intellectual virtues.

⁵⁷¹ Reid (1764) op. cit., p.419

⁵⁷² Sosa (2011) op. cit., p.42.

One important aspect of a virtuous approach to testimony is being fair to testifiers. Miranda Fricker's notion of 'epistemic justice'⁵⁷³ gains some purchase here, for we wish to habituate learners to be just in their approach to testimony: that is, to believe those who ought to be believed on a particular occasion and to disbelieve those who ought not to be believed. We can extend Fricker's definition to encapsulate some further types of intellectual justice relevant to the learning situation. These relate to approbation towards:

1. Testimony worthy of belief (Fricker's notion of justice to the testifier – either learner or teacher);
2. Genuinely creditworthy apt knowledge or, better still, reflective 'Knowledge+' possessed by the agent (a just regard for the learner, which rewards his epistemic virtue);
3. Epistemic distributive justice (the teacher, or other more knowledgeable agent, responding to need or gifting knowledge supererogatorily).

The generous impulse underlying this last action needs to be tempered, as we have seen, by the insights of *sungnōmē*, or we stand in danger of unhelpfully swamping the learner with too many true beliefs. There is a just amount of testimony – neither too much nor too little – which can only be discerned reliably by *phronēsis*.

As teachers, we ought to foster progress by the learners along the dimension of 'non-gullibility', to recognise category (1) above. We would like our younger learners to begin the process of becoming masters of folk psychology with respect to testimony, and thereby come to know that 'some people or types of people on some topics are reliable, others on others aren't'.⁵⁷⁴ This mastery will grow, typically, through the stages of incompetence, conscious competence and finally unconscious competence.⁵⁷⁵ We do not want our pupils to acquire a general suspicion – for that would be epistemically and morally corrosive – but we do wish them to cultivate an attunement to mendacity and agendas: not a continuous polling but a ready triggering in the event of subtly-signalled testimonial deception (the real-life equivalent of Pinocchio's nasal

⁵⁷³ Miranda Fricker (n.d.) op. cit., p.176.

⁵⁷⁴ Elizabeth Fricker (1995) op. cit., p.407.

⁵⁷⁵ This process of competence growth is described by William Smiley Howell (1982) op. cit. in Furness (2005) op. cit, p.252.

elongation). For these ‘epistemically-adept’ mature epistemic agents, Coady’s ‘standard warning signs of deceit [or] confusion ...’⁵⁷⁶ are then easily picked up. Learners can be helped to achieve this by starting from a default position of simple credulity⁵⁷⁷ towards testimony in general, then moving to a more discerning credulity confined to ‘non-loaded’ situations. Thus our students gradually develop an attunement towards epistemic agents and their testimony on various subjects – a learning process that takes place alongside the development and finessing of the other epistemic virtues. Students have an ‘a priori prima facie (pro tanto) entitlement to rely on’⁵⁷⁸ our apparent understanding, qua teacher, of the topic under discussion as being a genuine one – and hence to accept our pronouncements – but this is not enough. We want them to develop a mature stance towards testimony: a virtuous positioning between the extremes of a naïve ‘unreflective acceptance’ of others’ opinions and the obdurate rejection of reliable authority.

It is clear then, that if learners over-use ‘acceptance with reason inhibition’⁵⁷⁹ (see p.97), there is a danger of their going to sleep at their doxastic posts, so they need to become accustomed to their teacher sporadically misleading them for pedagogical purposes, without losing trust in her. With sophisticated learners (including a number of those at second and third levels, and perhaps some even earlier), it is possible to build an expectation that the teacher will on occasion be an agent provocateur or act in a faux-naïf manner and thus provide some $\sim p$ ‘provocatives’ (to use Socrates’ term),⁵⁸⁰ without the students losing their sense of default trust in the teacher. Here, we see potential for an Aristotelian ‘delight’ in her acting from (epistemic) virtue in such a ludic way, without her epistemic reputation being sullied.

The pupils’ affective responses are important here, according to Zagzebski: ‘... the ability to recognise reliable authority partly involves having trained feelings that permit one to be a reliable judge of the trustworthiness of another’.⁵⁸¹ In order that they can develop and practise their testimonial judiciousness, we need to provide learners with testimony that ought *not* be believed, thus triggering their incredulity and helping them

⁵⁷⁶ Coady (1992) op. cit., p.47.

⁵⁷⁷ I use the word ‘credulity’ here as not a vice but as a virtue, in Reid’s sense of a disposition that tallies with veracity (p.101).

⁵⁷⁸ Burge (1993) op. cit., p.110.

⁵⁷⁹ Henderson (2008) op. cit., p.197.

⁵⁸⁰ Plato, *Republic*, 523b-c.

⁵⁸¹ Zagzebski, *VOM*, p.151.

avoid the vice of unreflective acceptance. We saw earlier, however, that the very means by which infant credulity is eventually undermined (such as stories about Santa, the Tooth Fairy and the like, which are then revealed to be false) has its own dangers. Principe and Smith's paper shows these hazards vividly and underlines the need for good judgement on the part of the teacher – in particular, when determining the mixture of what we might term 'fact' and 'fantasy'.⁵⁸²

One relatively risk-free way of providing testimony which ought to be challenged, but which does not undermine trust in the teacher, is to use the extended testimony of the World Wide Web. The ability to differentiate between the plausible-but-suspect and the genuinely-credible has always been important, but the explosion in 'knowledge' which the Internet has catalysed makes the development of this virtue even more pressing: the Internet is a source of both true beliefs and egregious misinformation. Howard Gardner complains in his latest book that 'blogs can claim without evidence or consequence that the current American president was born in Kenya'.⁵⁸³ Exposing these *in silico* false beliefs need hurt no-one's feelings, nor disrupt the bonds of trust that ought to link teacher and pupil. Such activity does, however, provide practice in detecting false, incompetent or agenda-driven testimony. It also develops the important new epistemic skills of 'navigationism' in this virtual ocean of knowledge.⁵⁸⁴ But some of the warning cues which are present in social epistemic settings are not available in cyberspace. One method of cultivating attunement to mendacity in these former arenas is by the use of role play: we could, for example, set up a productive debate about the siting of a wind farm, to be carried out by students playing representatives of the various special-interest groups (farmers, conservationists, electricity-supply companies, politicians and so on). A subsequent discussion *about* the role-play would then be used to air some key epistemic points with respect to testimony.

⁵⁸² Principe & Smith (2008) op. cit., pp.625-642.

⁵⁸³ Gardner (2011) op. cit., p.3. These rumours subsequently forced the president to produce his 'long-form' birth certificate, and even this action did not quash them all. It took the assassination of Osama Bin Laden to divert attention away from this issue.

⁵⁸⁴ Seán Moran (2008) 'After behaviourism, navigationism?', *Irish Educational Studies* vol.27, no.3, pp.209-221.

How Teachers Ought to Act

We might idealise the teacher as an other-regarding, intellectually-virtuous, benevolent and emulable epistemic agent who is motivated to enhance both the knowledge and the epistemic virtue of learners by whatever means seem to her to be both virtuous and effective. Benevolence, prudence or justice may well override these epistemic desiderata, however, and the teacher is also, fortunately perhaps, likely to fall short of being either an epistemic or a moral saint.

The starting point for a teacher to be of actual epistemic use to a learner is for the former to be well-educated. To be an effective *other*-regarding epistemic agent, we need first to have been, and to continue to be, a *self*-regarding epistemic agent, in order that our efforts to improve the epistemic predicaments of others are tethered to reality via our own active engagement with knowledge. Carr, as we have seen, endorses this view in his claim that teachers ought to be well-read.⁵⁸⁵ This virtuous tethering – which will demand critical engagement by the teacher and not just passive acceptance of what she reads, hears, sees and so on – is what gives the knowledge its value, and lifts it above the class of mere true belief. The teacher who has putative ‘knowledge’ that is not properly enwebbed to reality may be less confident in, and will hence avoid, free ranging discussion and virtuous exploration, for fear of being exposed. Her knowledge ought to go beyond the syllabus and be well-tethered, so that she is able to entertain and counteract the suggestion that $\sim p$. Furthermore, if Zagzebski is right that the epistemic virtues are initially acquired by imitation and habituation, then teachers ought to act as exemplars of epistemic virtue in order to provide a *Vorleben* for the learners. This is a much more demanding role than a simplistic notion of the teacher as the deliverer of a centrally-prescribed curriculum. Moreover, we ought not only to have the other-regarding, epistemically-virtuous motivation to model intellectual virtue and help our students to attain Zagzebksian ‘cognitive contact with reality’, but must also have the means to bring this to fruition. During the virtuous epistemic engagement, both teacher and learner should feel some degree of pleasure, if Aristotle is correct about this signature of virtue.

⁵⁸⁵ Carr (2007) op. cit., p.386.

Our actions during this virtuous teaching episode (including, but not limited to, Teaching with a capital ‘T’) must be (i) motivated by intellectual virtue; (ii) of a type in which an intellectually-virtuous person would engage; (iii) non-accidentally successful in achieving its goal in the intended beneficiary; and (iv) pleasurable to the agent. In this felicitous epistemic interchange, Aristotle’s *sungnōmē* (sympathetic judgement) allows us to understand our interlocutor’s precise predicament before attempting to give the help that our own active engagement with knowledge enables us to provide. *Sungnōmē* and *nous* act as precursors to teacherly *eupraxia* in the case of ‘all good men in their behaviour towards others’.⁵⁸⁶ We can take our apprehension of the specific needs of the learner in the concrete situation to supply the minor premiss in a practical syllogism, in which the major premiss asserts our (defeasible) epistemic duty to aid our students in their epistemic predicaments. Behaving with regard to this syllogism is central to our work as teachers. We use it intuitively to act from the appropriate interlocking virtues in the given case. For example, if we wish to develop the learner’s creative intellectual virtues of originality and inventiveness which ‘qualify as analogous to supererogatory moral traits’ (*VOM*, p.155), we might adopt a two-stage approach, starting with uncritical encouragement and followed by a sympathetic maieutic process,⁵⁸⁷ which is animated by the virtue of being ‘a good listener (and critic) insofar as [we] help other epistemic agents to examine their own beliefs carefully and lucidly’.⁵⁸⁸ Recognising the minor premiss is not an easy task, though, and to do it justice we need to be capable of putting ourselves into the learner’s shoes and of discerning sensitively his epistemic predicament, while bearing in mind the structure of the subject-discipline with which we are both engaging.

It is perhaps desirable on grounds of autonomy that the process is not too totalising, however: the ‘enwebment’ in an epistemic community I have advocated ought still to respect the individual’s doxastic web. Our other-regarding epistemic acts should not involve drowning the learner’s voice as he struggles to access the prize of the knowledge we offer, ‘if he will only see things as we see them’. The added inducement of academic credit, if he succumbs to our vision, adds further to these dangers. Our pedagogical intentions thus trump our purely epistemic duties and these in turn are trumped by the moral virtue of benevolence, for we ought to keep in mind the *telos* of

⁵⁸⁶ Aristotle, *Nicomachean Ethics*, bk.VI, 6, 1143a, 32.

⁵⁸⁷ Plato, *Theaetetus*, 149-152.

⁵⁸⁸ Kawall (2004) op. cit., p.260.

the learner's overall flourishing as well as the immediate epistemic *skopoi*. So, using our insights and *kairik* powers to bypass pupils' autonomy and 'spellbind' them is to be done sparingly and with great care. As we saw earlier, there can be some justification for mythologising, partial truth-telling, indirection and oversimplification as *skopic* routes to the longer-range *telos* of enhanced cognitive contact with reality. However, making too strong a case for the propositions we are pushing onto learners would have much in common with Aristotle's vice of boasting [*alazoneia*].⁵⁸⁹ The right degree of testimonial force – that which falls short of spellbinding, but is not rejected before it is entertained – can be determined only by teacherly *phronēsis*.

In addition to a consideration of the epistemic needs of individual learners, we ought to bear in mind that the teacher is one (important) node in the temporary epistemic community that the class periodically forms. So, her epistemic largesse, if informed by *sungnōmē*, can also be effective in a more diffuse way than through the straightforward teacher-learner dyad. By increasing the knowledge available to the community she nurtures, the teacher is due other-regarding epistemic credit, as long as there is a degree of uptake, intellectual virtue and pleasure distributed around the community's web. Although some of this may not come to fruition immediately, and some may depend upon further mediation via the community, this does not detract from the credit deserved by the teacher, for her beneficial agency has increased the epistemic good in her classroom.

How Learners Ought to Act

So that the learner may benefit from these good intentions and virtuous pedagogical actions, he too must bring some virtues to the table, and these should interlock with the teacherly epistemic virtues in the way described earlier (p.244). In the simplest case, this could be a combination of the learner's 'being able to recognize reliable authority',⁵⁹⁰ and the teacher's 'teaching virtues: the social virtues of being communicative, including intellectual candor and knowing your audience and how they respond'.⁵⁹¹ As we have seen at various points in this work, though, over-reliance on this dependency-driven dyadic combination is fraught with dangers. The learner, therefore, ought to be animated by the full range of intellectual virtues, in proportions

⁵⁸⁹ Aristotle, *Nicomachean Ethics*, 1127a13-15.

⁵⁹⁰ Zagzebski (1996) *VOM*, p.114.

⁵⁹¹ Zagzebski (1996) *VOM*, p.114.

suitable for his age and propensities and for the particular concrete learning situation. Our part in this is to act from virtues co-ordinated with those we wish to animate the learner, perhaps along the lines of the table in Appendix B.

A balanced approach to this is desirable: massaging the learner's ego by never challenging his web of beliefs is not the action of a virtuous teacher. But, at the other extreme, a steamrolling elenchus or unremitting *parrhesia* on the part of the teacher may so undermine the learner that he retreats beneath his carapace and is unable to engage with the ideas virtuously, if at all. We should foster an atmosphere in which learners can take pride in their acquisition of knowledge and experience *nikhedonia*⁵⁹² on those inevitable occasions when progress temporarily stalls (p.232). In order to achieve this desideratum, the teacher ought to be well-attuned to their epistemic predicaments and successes and thus able to make *eukairik* interventions and bestow appropriate praise. Modelling other-regardingness in this fashion, and promoting it in other ways, can help develop the fellow-feeling and generosity of class members. If the classroom social environment is safe and conducive to honesty, not only will general well-being be promoted, virtuous learning will also be more likely to occur.

Final Implications and Conclusions

We can view the student as someone who acts from epistemic virtue to bring his web of beliefs into closer cognitive alignment with reality by means which include intersubjective triangulation with the webs of others, including that of his teacher.

We can identify the teacher normatively as both personally and epistemically virtuous, a cynosure for others seeking to develop their intellectual dispositions, and a source of testimony and intersubjective triangulation for the epistemic community. In being so, she ought also to achieve a benevolent attunement with those whose epistemic predicaments she wishes to help ameliorate, whilst intervening in a *eukairik* and virtuous way. Unlike Kant's philanthropist, who is not to be thought virtuous when 'find[ing] an inner satisfaction in spreading joy and tak[ing] delight in the contentment of others',⁵⁹³ she deserves approbation precisely when she feels thus, as long as this

⁵⁹² A pleasurable anticipation of future success.

⁵⁹³ Kant (1785) op. cit., p.8.

affect is well-grounded. The virtuous teacher will feel pleasure at the right things for the right reasons.

In practice, the teacher generally has a set of propositions (p_1, p_2 and so on), which she would like the learner to know, but a simple statement of these propositions, with no consideration being given to their negations ($\sim p_1, \sim p_2$ and so on) or the broader implications is, as has been demonstrated, an unsatisfactory system for encouraging virtuous belief-revision in the learner. Any ‘borrowed wealth’ the learner may thus acquire will ‘turn into leaves and dust when it comes to use’.⁵⁹⁴ As the Levi identity shows (p.173), part of this belief-revision in response to epistemic input p is a process of derogating $\sim p$ and its dependent proximal propositions. For these changes to ripple through the learners’ epistemic webs, sufficient time and a fuller engagement than that provided by the teacher’s being in declamatory mode are needed, and this relies on the learner being animated by epistemic virtues other than simple credulity. Open-mindedness, for instance, allows the learner to entertain both p and $\sim p$, before making a virtuous judgement about which one of the two to derogate. Of course, such leisurely inspection of atoms of knowledge is not practicable for an entire programme of learning, for p is only one of a large set of propositions, which the teacher wants the learner to know, and which in turn constitute only part of the overall desired outcomes, typically expressed as knowledge, skills and competences. Furthermore, learners’ minds, as well as our own, are like Descartes’ ‘ancient cities that were once mere villages and have become large towns [and] are [thus] usually ... poorly laid out’:⁵⁹⁵ a fact which renders naïve any expectation that every p – ancient and modern – is equally defensible. Some true propositions acquired in early childhood may be unexamined and hence are to be regarded as Sosa’s ‘animal knowledge’ – and others would have the status of mere true beliefs – but new knowledge should as far as possible follow more stringent building regulations and conform to Sosa’s higher-grade knowledge (K^+): ‘apt belief aptly noted’ ($K_s K_s p$). The learner then not only has an apt belief that p , but also an apt belief that his knowing p is defensible against future pertinent sceptical doubts that imply $\sim p$. This is a more robust and better-tethered type of knowledge. The epistemically-virtuous learner thus acquires a superior variety of knowledge than his less creditable classmate: *scientia* rather than *cognitio*.

⁵⁹⁴ Locke (1706) op. cit., bk.I, ch.IV, §23.

⁵⁹⁵ René Descartes (1637) *Discourse on Method*, [tr. Donald Cress] (Indianapolis: Hackett, 1998) p.7.

The scenario to be avoided is one in which the teacher has herself acquired a set of propositions credulously from an authoritative source (perhaps a national school curriculum authority) and now expects her pupils to do likewise. Some virtue epistemologists have not yet appreciated that their work can help counter this view, and indeed make some statements which support it. Sosa, for instance, draws a distinction between ‘assertion ... as a human being who communicates with other human beings, and assertion as occupier of a role’.⁵⁹⁶ Moreover, he explicitly characterises a teacher as ‘a mouthpiece for a deeper institutional source of the information conveyed ... that is the school.’ But neither this, nor Kawall’s claim that the teacher’s epistemic duty is to ‘transmit information’,⁵⁹⁷ will do. This is not a desirable other-regarding modus vivendi for teachers, since there is an epistemic bypass connecting the enunciandum and the enounced, with the teacher qua enunciator being merely a conduit for the pre-determined syllabus. This role is not an epistemically-virtuous one, in the same way as an internet connection is not virtuous (nor, we might add, is it vicious: it is simply a neutral channel.) There is something objectionably inauthentic and mechanistic about acting almost like a ventriloquist’s dummy in this way, which the virtuous teacher ought to resist and remedy by a critical engagement with the enunciandum and an encouragement to the learners to do likewise. Such an engagement by the teacher endows the enounced with greater value – the difference between Levinas’ ‘saying’ and ‘said’ (p.67).

In order to enable this proper engagement to take place, it may well be necessary to reduce the amount of content, for such parsimony will release the time needed for a more leisurely, virtuous approach to the remaining propositions. The alternative of a closed-minded, dutiful ‘transmission’ of approved propositions on the teacher’s part and the consequent lack of authentic doxastic engagement by the learner is the road to *Halbbildung*, even if the pupils appear to be doing well, judged by their examination results.

Furthermore, an unreflective use of assessment of this propositional knowledge could reward vice and penalise virtue, thus offending against epistemic justice in my sense number 2 (p.262). Indeed, the contemporary obsession with measurable learning outcomes and awarding credit for overt intellectual performance does not discriminate

⁵⁹⁶ Sosa (2011) *op. cit.*, p.47.

⁵⁹⁷ Kawall (2004) *op. cit.*, p.271.

between the virtuous and vicious backstories to such performance (as we saw in the case of the music student on the tram [p.206] who may well have achieved a high score on her music assignment). To the positivistically-inclined assessor, two students who hit the same targets deserve the same credit, but from a virtue perspective one may be seen as less epistemically-praiseworthy than the other, if his applauded performance comes from a shallow *mimēsis* rather than from genuine intellectual virtue.

In closing, we see that the teacher is not to be seen as merely an efficient deliverer of prescribed learning outcomes but as an epistemic agent whose personal engagement with knowledge, and whose sensitivity to the epistemic predicaments of her students, enables her to act in ways conducive to their flourishing vis-à-vis knowledge and the cultivation of intellectual virtue. Her learning targets ought not be too tightly defined and her practice should not be reduced to algorithms. However, her virtuous make-up must include both the intellectual and the moral, typified by the other-regarding teacherly virtues of *sungnōmē* and *philanthropia*.

In order to be a truly virtuous person, moreover, Aristotle requires her to embody *all* of the virtues – an implausibly stringent demand. However, he puts one intellectual virtue in the lead role, for ‘the possession of the single virtue of practical wisdom will carry with it the possession of them all.’⁵⁹⁸ This is the virtue of *phronēsis*, championed by David Carr, Wilfrid Carr, Joseph Dunne, Elliot Eisner and others, who have brought Aristotelian ideas to bear on some educational concerns over the past two decades or so, by way of seeking a more defensible set of commitments than rivals such as technicism can offer. It is this practical wisdom which enables the teacher to do the right thing in the concrete, social, learning situation: to be animated by the correct epistemic virtue in order to co-ordinate with that virtue which ought to be cultivated in the learner at that moment; to enounce epistemically-helpful testimony (neither too much nor too little); to deal sympathetically with counterfactuals, $\sim p$, when they arise in the learner (or to introduce them as ‘provocatives’ when they do not arise); and to model what it is to be an epistemically and morally virtuous person (not a saint, but someone who is doing her best in the given situation and usually gets it right). By such other-regarding epistemic action on the part of the teacher, the learner is helped to cultivate his own intellectual virtues and thus enhance his ‘cognitive contact with

⁵⁹⁸ Aristotle, *Nicomachean Ethics*, 1145a3.

reality'. When this confluence of virtues occurs, a deeper, more fully-enwebbed learning takes place, which will be more authentic, more perspectival and longer lasting than some of the counterfeit 'learning' promoted by adherents of less-developed construals of knowledge. The learner will be better educated. Such access to epistemic goods is part of the learner's overall well-being; and part of his intellectual flourishing is to be animated by the epistemic virtues. Furthermore, during some of these learning moments, both epistemic agents – the teacher and the taught – will experience a merited intellectual and affective uplift.

Bibliography

Adams, E.W. (1988) 'Modus Tollens Revisited', *Analysis*, vol.48, no. 3, pp.122-128

Adler, J. (2004) 'Reconciling open-mindedness and belief', *Theory and Research in Education*, vol.2(2), pp.127-142

Agathon, Br. (1785) *The Twelve Virtues of a Good Teacher (Les Douze Vertus d'un bon Maître)* [tr. Br. G. Rummery, 1998] [Online] available at:
<http://www.napcis.org/12VirtuesGoodTeacher.pdf>

Alchourrón, C., P. Gärdenfors & D. Makinson (1985) 'On the logic of theory change: Partial meet contradiction and revision functions', *The Journal of Symbolic Logic*, 50, pp.510-531

Anscombe, G.E.M. (1957) 'Intention', *Proceedings of the Aristotelian Society*, New Series, vol.57, pp.321-332

Anscombe, G.E.M. (1958) 'Modern Moral Philosophy', *Philosophy*, 33, reprinted in Crisp, R. & M. Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press), pp.26-44

Annas, J. (2003) 'The structure of virtue' in M. DePaul & L. Zagzebski [eds.] *Intellectual Virtue: Perspectives from Ethics and Epistemology* (Oxford: Oxford University Press)

Anon. (Date: 'After Peloponnesian War' [post 404 BCE]) 'Dissoi Logoi or Dialexeis: Two-fold arguments' [tr. R.K. Sprague] *Mind*, vol.LXXVII, no.306, April 1968, pp.155-167

Aquinas, T., *The Cardinal Virtues* from *Summa Theologica* [tr. R.J. Regan] (ND, USA: Hackett, 2005)

Aquinas, T., *Quaestiones disputatae de virtutibus, Textum Taurini (1953) editum ac automato translatum a Roberto Busa SJ in taenias magneticas denuo recognovit Enrique Alarcón atque instruxit.* [online] Available at:
<http://www.corpusthomicum.org/qdw2.html> [Accessed 24 May, 2010]

Argyris, C. (1999) *On Organizational Learning* [2nd Edition] (Oxford: Blackwell)

Aristotle, *Nicomachean Ethics* [tr. D.P. Chase, 1847] (London: Walter Scott Limited)

Aristotle, *Nicomachean Ethics* [tr. J.A.K. Thompson, notes by Hugh Tredennick] (London: Penguin Books, 2004)

Aristotle, *The Complete Works: Revised Oxford Translation* (Bollingen Series) [ed. J. Barnes] (Princeton: Princeton University Press, 1984)

APA (2000) *Diagnostic and Statistical Manual of Mental Disorders* [4th edition] DSM-IV (Arlington, VA: American Psychiatric Association)

Augustine, *Confessions* [tr. H. Chadwick] (Oxford: Oxford University Press, 1991)

Axtell, G. (2000) *Knowledge, Belief and Character* (Lanham, Maryland: Rowman & Littlefield)

Baehr, J. (2007) 'On the Reliability of Moral and Intellectual Virtues', *Metaphilosophy*, vol.38, no.4, pp.456-470

Bailey, D.T.J. (2008) 'Excavating Dissoi Logoi 4', *Studies in Ancient Philosophy*, 35, pp.249-264

Battaly, H. (2010) 'Introduction: Virtue and Vice', *Metaphilosophy*, vol.41, nos.1-2, pp.1-21

- Bauer, K. (1999) *Adorno's Nietzschean Narratives* (Albany, NY: SUNY)
- BBC (2009) *Between Ourselves*, Radio 4, 198m Long Wave, 5 August
- BBC (2010) *Reith Lecture*, Radio 4, 198m Long Wave, 15 June.
- BBC (2010) *Uncertain Climate*, Radio 4, 198m Long Wave, 30 Aug
- Beauchamp, T.L. & J.F. Childress (1989) *Principles of Biomedical Ethics*, [3rd edn.] (New York: Oxford University Press)
- Benner, P. (2000) 'Book Review: Back to the rough ground, practical judgement and the lure of technique by Joseph Dunne (1993)', *Nursing Philosophy*, vol.1, iss.1, p.83
- Blackburn, S. (2005) *Truth: A Guide for the Perplexed* (London: Penguin Books)
- Blake, N., P. Smeyers, R.D. Smith, P. Standish (2003) [eds.] *The Blackwell Guide to the Philosophy of Education* (Oxford: Blackwell Publishing)
- Bloom, A. (1987) *The Closing of the American Mind* (New York: Simon and Schuster)
- Boghossian, P. (2006) *Fear of Knowledge: against relativism and constructivism* (Oxford: Oxford University Press)
- Bonnefon, J-F. & G. Villejoubert (n.d.) 'Modus Tollens, Modus Shmollens: Contrapositive Reasoning and the Pragmatics of Negation', (Toulouse, France: LTC-CNRS)
- Borge, S. (2003) 'The word of others', *Journal of Applied Logic*, 1, pp.107-118
- Bowles, S., R. Boyd, E. Fehr, H. Gintis (1997) *Homo reciprocans: A Research Initiative on the Origins, Dimensions, and Policy Implications of Reciprocal Fairness* (Massachusetts: University of Massachusetts)
- Brady, M. & D. Pritchard (2003) *Moral and Epistemic Virtues* (Oxford: Blackwell)

- Brady, M. & D. Pritchard (2006) 'Epistemic Virtues and Virtue Epistemology', *Philosophical Studies*, 130, pp.1-8
- Brown, T.H. (2005) 'Beyond constructivism: Exploring future learning paradigms', *Education Today*, iss.2, pp.1-11
- Buber, M. (1947) *Between Man and Man* (London: Routledge Classics, 2002)
- Buckhout, R. (1974) 'Eyewitness Testimony', *Scientific American*, 231/6, pp.23-31
- Bueno, O. (2009) 'Sosa on Skepticism', *Metaphilosophy*, vol.40, no.2, pp.195-202
- Burbules, N.C. (2000) 'Aporias, Webs and Passages: Doubt as an Opportunity to Learn', *Curriculum Enquiry*, 30:2, pp.171-187
- Carr, D. (2001) 'Educational Philosophy, Theory and Research: A Psychiatric Autobiography', *Journal of Philosophy of Education*, vol.35, no.3, pp.461-476
- Carr, D. (2003) *Making sense of education: an introduction to the philosophy and theory of education and teaching* (Abingdon: RoutledgeFalmer)
- Carr, D. (2005) 'Personal and Interpersonal Relationships in Education and Teaching: A Virtue Ethical Perspective', *British Journal of Educational Studies*, vol.53, no.3, pp.255-271
- Carr, D. (2007) 'Character in Teaching', *British Journal of Educational Studies*, vol.55, no.4, pp.369-389
- Carr, D. (2006) 'Professional and personal values and virtues in education and teaching', *Oxford Review of Education*, vol.32, no.2, pp.171-183
- Carr, D. (2009) 'Revisiting the Liberal and Vocational Dimensions of University Education', *British Journal of Educational Studies*, vol.57, no.1, pp.1-17

Carr, D. (2010) 'Education, Contestation and Confusions', *British Journal of Educational Studies*, vol. 58, no.1, pp.89-104

Carr, W. (2004) 'Philosophy and Education', *Journal of Philosophy of Education*, vol.38, no.1, pp.55-73

Carr, W. (2005) [ed.] *The RoutledgeFalmer Reader in Philosophy of Education* (London: Routledge)

Chi, M.T.H. (2008) 'Three Types of Conceptual Change: Belief Revision, Mental Model Transformation and Categorical Shift', in S. Vosniadou [ed.] *Handbook of research on conceptual change* pp.61-82 (Hillsdale, NJ: Erlbaum)]

Claxton, G. (2000) 'The anatomy of intuition' in T. Atkinson & G. Claxton [eds.] (2000) *The Intuitive Practitioner* (Buckingham: The Open University Press)

Coady, C.A.J. (1992) *Testimony: A Philosophical Study* (Oxford: Clarendon Press)

Coady, C.A.J. (2002) 'Testimony and intellectual autonomy', *Studies in History and Philosophy of Science*, 33, pp.355-372

Code, L. (1984) 'Towards a "Responsibilist" Epistemology', *Philosophy and Phenomenological Research*, vol.XLV, no.1, pp.29-50

Cohen, S. (2009) 'Knowledge as aptness', *Philos. Stud.*, 144, pp.121-125

Colwill, I. (2005) *What has the national curriculum ever done for us?* (London: Qualifications and Curriculum Authority) [Online] Available at: www.qca.org.uk/futures [Accessed 5 March 2009]

Cooper, D.E. 'Postmodernism', R. Curren [ed.] (2003) *A Companion to the Philosophy of Education* (Oxford: Blackwell)

Cottingham, J., R. Stoothoff & D. Murdoch (eds.) (1985) *The Philosophical Writings of Descartes* (Cambridge: Cambridge University Press)

Crisp, R. & M. Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press)

Crisp, R. (2010) 'Virtue Ethics and Virtue Epistemology', *Metaphilosophy*, vol.41, nos.1-2, pp.22-40

Csikszentmihalyi, M. (1991) *Flow: The Psychology of Optimal Experience* (paperback edition) (New York: HarperPerennial)

Cuperus, G. (2007) 'Traveling with Socrates', G.A. Scott (ed.) (2007) *Philosophy in Dialogue: Plato's Many Devices* [paperback] (Evanston, IL: Northwestern University Press)

Curren, R. (ed.) (2003) *A Companion to the Philosophy of Education* (Oxford: Blackwell Publishing)

Cuyper, SE (2004) 'Critical Thinking, Autonomy and Practical Reason' *Journal of Philosophy of Education*, vol.38, no.1, pp.75-90

Dancy, J. (1985) *Introduction to Contemporary Epistemology* (Oxford: Blackwell)

Dancy, J. & E. Sosa (eds.) (1993) *A Companion to Epistemology* (Oxford: Blackwell Publishing)

Daston, L. & P. Galison (2007) *Objectivity* (New York: Zone Books)

Davis, B. & D. Sumara (2002) 'Constructivist Discourses and the Field of Education: Problems and Possibilities', *Educational Theory*, vol.52, no.4, pp.409-428

Day, J. (ed.) (1994) *Plato's Meno* (London: Routledge)

DePaul, M. & L. Zagzebski (eds.) *Intellectual Virtue: Perspectives from Ethics and Epistemology* (Oxford: Oxford University Press)

Descartes, R. (1641) *Meditations on First Philosophy* [tr. D. Clarke] in *Meditations and Other Metaphysical Writings* (London: Penguin Classics, 2000)

Descartes, R. (1637) *Discourse on Method* [tr. J Veitch, 1902] Everyman Edition (London: J.M. Dent, 1946)

Descartes, R. (1637) *Discourse on Method*, [tr. Donald Cress] (Indianapolis: Hackett, 1998)

DeYoung, R.K. (2008) 'The Seven Deadly Sins' *The Encyclopedia of Christianity*, vol.5 (Grand Rapids, Michigan: Wm. B. Erdmans Publishing Company)

Dickens, C. (1853) *Hard Times* (Ware, Herts: Wordsworth Classics, 1995)

Dissoi Blogoi (2011) [online] Available at:
www.dissoiblogoi.blogspot.com [Accessed 14 Feb 2011]

Douven, I. & S.E. Cuypers (2009) 'Fricker on testimonial justification', *Studies in History and Philosophy of Science*, vol.40, iss.1, pp.36-44

Dretske, F. (2000) 'Entitlement: Epistemic Rights Without Epistemic Duties?', *Philosophy and Phenomenological Research*, vol.LX, no.3, pp.591-606

Dunne, J. (1993) *Back to the Rough Ground* (Notre Dame: University of Notre Dame Press)

Dunne, J. (1999) 'Professional judgement and the predicaments of practice', *European Journal of Marketing*, pp.707-719

Dunne, J. (2003) 'Arguing for Teaching as a Practice: a Reply to Alasdair MacIntyre', *Journal of Philosophy of Education*, vol.37, no.2, pp.353-369

Dunne, J. & P. Hogan (2004) [eds.] *Education and Practice: Upholding the Integrity of Teaching and Learning* (Oxford: Blackwell Publishing Ltd)

Dunne, J. (2006) 'Newman Now: Re-examining the Concepts of 'Philosophical' and 'Liberal' in The Idea of a University', *British Journal of Educational Studies*, vol.54, no.4, pp 412-428

Eflin, J. (2003) 'Epistemic presuppositions and their consequences', *Metaphilosophy*, vol. 34, nos.1/2, p.54

Eisner, E.W. (2002) 'From *episteme* to *phronesis* to artistry in the study and improvement of teaching', *Teaching and Teacher Education*, vol.18, 4, pp.375-385

Elgin, C.Z. (2002) 'Take It from Me: The Epistemological Status of Testimony', *Philosophy and Phenomenological Research*, vol.65, no.2, pp.291-308

Fairweather, A. & L. Zagzebski (eds.) (2001) *Virtue Epistemology: Essays on Epistemic Virtue and Responsibility*, (Oxford: Oxford University Press)

Fallona, C. (2000) 'Manner in teaching: a study in observing and interpreting teachers' moral values', *Teaching and Teacher Education*, 16, pp.681-695

Ferguson, N. (ed.) (1997) *Virtual History: Alternatives and Counterfactuals* (London: Papermac)

Fernández-Armesto, F. (1997) *Truth: A History and a Guide for the Perplexed* (London: Bantam Press)

Flavell, J.H., P.H. Miller & S.A. Miller (2002) *Cognitive Development* [4th edn.] (Englewood Cliffs, NJ: Prentice-Hall)

Foley, R. (1994) 'The Epistemology of Sosa', *Philosophical Issues*, vol. 5, Truth and Rationality, pp.1-14

Foot, P. (1978) 'Virtues and Vices' in R. Crisp & M. Slote (1997) *Virtue Ethics* (Oxford: Oxford University Press)

Foucault, M. (1983) *Discourse and Truth: the Problematization of Parrhesia. Six lectures given by Michel Foucault at the University of California at Berkeley*. Later Published under the title *Fearless Speech* (Semiotext(e) / Foreign Agents, 2001)

Fricker, E. (1995) 'Critical Notice [of C.A.J. Coady's (1992) book]: Telling and Trusting: Reductionism and Anti-Reductionism in the Epistemology of Testimony', *Mind*, vol.104, no.414, pp.393-411

Fricker, E. (2002) 'Trusting others in the sciences: a priori or empirical warrant?', *Studies in History and Philosophy of Science*, 33, pp.373-383

Fricker, E. (2005) 'Knowledge from Trust in Testimony is Second-Hand Knowledge', Conference paper, *Rutgers Epistemology Conference*, May 2005

Fricker, M. (2008) 'Replies to Critics', *Theoria*, 61, pp.81-86

Friere, P. (1970, tr. 1996) *Pedagogy of the Oppressed* [tr. MB Ramos] (New York: Continuum International Publishing Group inc.)

Gadamer, H-G. (1975) *Truth and Method*, 2nd Edition (New York: The Seabury Press)

Gallagher, D. (2006) 'The Platonic-Aristotelian Hybridity of Aquinas's Aesthetic Theory', *Hortulus*, vol.2, no.1

Gardner, H. (2006) *The Development and Education of the Mind: The selected works of Howard Gardner* (Abingdon: Routledge)

Gardner, H. (2011) *Truth, Beauty and Goodness Reframed: Educating for the Virtues in the Twenty-First Century* (New York: Basic Books)

Guardian, The (2010) 25 October

Gendlin, E.T. (1964). 'Review of Merleau-Ponty's *The structure of behavior*', *The Modern Schoolman*, 42, pp.87-96 [Online] available at http://www.focusing.org/gendlin/docs/gol_2091.html [Accessed 15 April 2011]

- Gettier, E. (1963) 'Is Justified True Belief Knowledge?', *Analysis*, 23, pp.121-123
- Giuculescu, G. (1998) 'The Leibnizian dimension of Husserl's phenomenology', *Analectia Husserliana*, vol.LII, bk.1
- Goldberg, I. & D. Henderson (2006) 'Monitoring and Anti-Reductionism in the Epistemology of Testimony', *Philosophy and Phenomenological Research*, vol.LXXII, no.3
- Goldman, A., E.R. Moros & R.J. Umbers (2004) 'Distinguishing Virtues from Faculties in Virtue Epistemology', *Southern Journal of Philosophy*, vol.XLII, p.65
- Goldman, A. & E. Olsson (forthcoming) 'Reliabilism and the Value of Knowledge' in Haddock, A., A. Miller, D. Pritchard (eds.) (Forthcoming) *Epistemic Value* (Oxford: Oxford University Press), p.4 of pre-print. [Since published: 2009]
- Gove, P. (ed.) (1993) *Webster's Third New International Dictionary* (Cologne: Könenmann)
- Government of Ireland (2007) *National Development Plan 2007-2013: Transforming Ireland – A Better Quality of Life for All* (Dublin: The Stationery Office)
- Grayling, A.C. (2001) *The Meaning of Things* (London: Phoenix)
- Greco, J. (2010) *Achieving Knowledge: A Virtue-Theoretic Account of Epistemic Normativity* (Cambridge: Cambridge University Press)
- Gregory, R.L. (1998) *The Oxford Companion to the Mind* (Oxford: Oxford University Press)
- Gutheil, T.G., M. Hauser, M.S. White, G. Spruiell, L.H. Strasburger (2003) 'The Whole Truth Versus The Admissible Truth: An Ethics Dilemma for Expert Witnesses' *J. Am. Acad. Psychiatry Law*, 31, pp.422-427

- Hamilton, E. & H. Cairns (eds.) (1961) *Plato: Collected Dialogues*, Nineteenth Printing (Princeton: Princeton University Press, 2005)
- Hare, W. (2007) 'Credibility and Credulity: Monitoring Teachers for Trustworthiness', *Journal of Philosophy of Education*, vol.41, no.2, pp.207-218
- Henderson, D. (2008) 'Testimonial Beliefs and Epistemic Competence', *Noûs*, 42:2, pp.190-221
- Harrabin, R. (2010) *Uncertain Climate*, BBC Radio 4, 198m, Long Wave, 30 Aug
- Hertnon, S. (2008) *From afterwit to zemblanity* (Auckland, NZ: New Holland)
- Hogan, P. (1995) *The Custody and Courtship of Experience* (Dublin: The Columba Press)
- Hogan, P. (2000) 'Virtue, Vice and Vacancy in Educational Policy and Practice', *British Journal of Education Studies*, vol.8, no.4, pp.371-390
- Hogan, P. (2010) *The New Significance of Learning* (London: Routledge)
- Homer, *The Odyssey* (tr. 1991) [tr. E.V. Rieu; revised D.C.H Rieu] (London: Penguin)
- Hookway, C. (2003) 'How to be a Virtue Epistemologist' in M. DePaul & L. Zagzebski (eds.) (2003) *Intellectual Virtue: Perspectives from Ethics and Epistemology* (Oxford: Oxford University Press)
- Horsthemke, K. & M. Kissak (2008) 'Vorleben: educational practice beyond prescription', *J. Curriculum Studies*, vol.40, no.3, pp.277-288
- Howell, W.S. (1982) *The Empathic Communicator* (Belmont, CA: Wadsworth Pub. Co.)
- Hume, D. (1748) 'An Enquiry Concerning Human Understanding', *Classics of Western Philosophy* [ed. S. Cahn] (Indianapolis: Hackett Publishing Company Inc, 1999)

- Hursthouse, R. (2006) 'Practical wisdom: a mundane account', *Meeting of the Aristotelian Society, held in Senate House, University of London.*'
- Hyland, D.A. (2008) *Plato and the Question of Beauty* (Bloomington, IN: Indiana University Press)
- Hyslop-Margison, E.J. (2003) 'The Failure of Critical Thinking: Considering Virtue Epistemology as a Pedagogical Alternative', *Philosophy of Education*, (ed. K. Alston) (Urbana, Illinois: Philosophy of Education Society, 2004), pp.319–326.
- Johnson, F.L. (2004) *Dependency-Directed Reconsideration* (NY, NY: The State University of New York)
- Kampfner, J. (2003) *New Statesman*, 1 December. [online] Available at: <http://www.newstatesman.com/200312010017> [Accessed 7 March 2011]
- Kang, S.H. and S. Kim Lau (2007) 'Ontology Revision on the Semantic Web: Integration of belief revision theory', *Proceedings of the 40th Hawaii International Conference on System Sciences*
- Kant, I. (1778) *Lectures on Ethics* [tr. L.Infield] (New York: Harper Row, 1930, 1963)
- Kant, I. (1785) *Grundlegung zur Metaphysik der Sitten, Groundwork for the Metaphysic of Morals* [tr. J. Bennett, July 2005, Last amended September 2008] [Online] Available at: <http://www.earlymoderntexts.com/pdf/kantgw.pdf> [Accessed 24 May, 2010]
- Kant, I. (1787) *Critique of Pure Reason* [tr. N. Kemp-Smith, 1929] (Basingstoke: Palgrave)
- Kaspar, L.F. (ed.) (1997) *Teaching English through the Disciplines: Psychology* (Oceanside, NY, USA: Whittier)

Kawall, J. (2004) 'Other-regarding epistemic virtues', *Ratio (new series)*, XV, 3 pp.257-275

Kay, J. (2011) *Obliquity: Why our Goals Are Best Achieved Indirectly* [paperback] (London: Profile Books Ltd.)

Kennedy, D. (2007) *Writing and Using Learning Outcomes* (Cork: University College Cork)

Kenny, A. (1992) *Aristotle on the Perfect Life* (Oxford: Oxford University Press)

Kidd, I.G. (1994) 'Socrates', J. Day [ed.] *Plato's Meno* (London: Routledge)

Knight, K. (2008) *The Summa Theologica of St. Thomas Aquinas* [Second and Revised Edition by Fathers of the English Dominican Province, 1920] Online Edition [Online] Available at: <http://www.newadvent.org/summa/3110.htm>

Kreidler, C.W. (1998) *Introducing English Semantics* (London: Routledge)

Kusch, M. & P. Lipton (2002) 'Testimony: a primer', *Studies in History and Philosophy of Science*, 33, p.211

Kvanvig, J.L. (1992) *The intellectual virtues and the life of the mind: on the place of the virtues in epistemology*, (Lanham: Rowman & Littlefield Publishers, Inc.)

Leander, K.M & D.E. Brown (1999) "'You Understand, But You Don't Believe It": Tracing the Stabilities and Instabilities of Interaction in a Physics Classroom Through a Multidimensional Framework', *Cognition and Instruction*, vol.17, no.1, pp.93-135

Lear, J. (1988) *Aristotle: the desire to understand* (Cambridge: Cambridge University Press)

Levin, M. (2004) 'Virtue Epistemology: No New Cures', *Philosophy and Phenomenological Research*, vol.LXIX, no.2, pp.397-410

- Lennon, K. (2009) Book Review 'Epistemic Injustice: Power and the Ethics of Knowing by Miranda Fricker (2007)', *The Philosophical Quarterly*, vol.59, no.234
- Lewis, C.S. (ed. P.S. Klein, 2005) *Virtue and Vice: A Dictionary of the Good Life* (New York: HarperCollins)
- Lewis, D (1973) *Counterfactuals*, [paperback edition] (Oxford: Basil Blackwell)
- Lin, S.C., J. Hsu, V.Y. Fan (2009) "'Silent virtuous teachers": anatomical dissection in Taiwan', *British Medical Journal*, vol.339, pp.1438-1439
- Lipton, P. (1998) 'The Epistemology of Testimony', *Studies in History and Philosophy of Science*, vol.29, no.1, pp.1-31
- Locke, J. (1706) *An Essay Concerning Human Understanding* (London: Penguin Books, 1997)
- Lockie, R. (2008) 'Problems for virtue theories in epistemology', *Philos. Stud.*, 138, pp.169-191
- Long, C.P. (2002) 'The ontological reappropriation of phronesis', *Continental Philosophy Review*, 35, pp.35-60
- Lorenz, E. (1972) 'Does the Flap of a Butterfly's wing in Brazil Set Off a Tornado in Texas?' (Washington DC, USA)
- Lyotard, J-F. (1979) [tr. G. Bennington & B. Massumi, (1984)] *The Postmodern Condition: A Report on Knowledge* (Manchester: Manchester University Press)
- Madigan, T.J. (2008) *W.K. Clifford and the Ethics of Belief* (Cambridge: Cambridge Scholars)
- Marar, Z. (2008) *Deception* (Stocksfield: Acumen Publishing Limited)

- Marshall, J.D. (1999) 'Performativity: Lyotard and Foucault Through Searle and Austin', *Studies in Philosophy and Education*, 18, pp.309-317
- Marshall, S.E. (2003) 'Epistemic Injustice: The Third Way?', *Metaphilosophy*, vol.34, nos.1/2 pp.174-177
- Masschelein, J. & N. Ricken (2003) 'Do We (Still) Need the Concept of *Bildung*?', *Educational Philosophy and Theory*, vol.35, no.2, pp.139-154
- McGinn, C. (1997) *Ethics, Evil, and Fiction* (Oxford: Clarendon Press)
- MacIntyre, A. (1985) *After Virtue* (London: Duckworth)
- McLaughlin, T.H. (2000) 'Possibilities, tensions and tasks', *Journal of Education Policy*, 15, 4, pp.441-457
- Memon, A., S. Mastroberardino, J. Fraser (2008) 'Münsterberg's Legacy: What Does Eyewitness Research Tell Us About the Reliability of Eyewitness Testimony?', *Applied Cognitive Psychology*, 22, p.841
- Meyer, J. & R. Land (2003) *Threshold Concepts and Troublesome Knowledge: Linkages to Ways of Thinking and Practising within the Disciplines*. Occasional Report 4. (Edinburgh: ETL Project)
- Meyer, J.H.F. & R. Land (2005) 'Threshold concepts and troublesome knowledge (2) Epistemological considerations and a conceptual framework for teaching and learning', *Higher Education*, 49, pp.373-388
- Middleton, C. (ed. & tr.) (1996) *Selected Letters of Friedrich Nietzsche* (Indianapolis: Hackett)
- Mill, J.S. (1859) *On Liberty* (London: Penguin Books Ltd., 1974)
- Montmarquet, J.A. (1987) 'Epistemic Virtue', *Mind*, vol.96, no.384, pp.482-497

Moran, S. (2007) 'What is science education for?', *School Science Review*, 89, 326, pp.97-102

Moran, S. (2008) 'After behaviourism, navigationism?', *Irish Educational Studies* vol.27, no.3, pp.209-221

Moran, S. (2009) 'Virtuous Teachers and Quality Learning', Eva Janebová (ed.) (2009) *Quality in Language Teaching* (Prague: Prague Metropolitan University)

Moravcsik, J. (2000) 'Health, Healing and Plato's Ethics', *The Journal of Value Enquiry*, 34, pp.7-27

Moros, E.R. & R.J. Humbers (2004) 'Distinguishing Virtues from Faculties in Virtue Epistemology', *Southern Journal of Philosophy*, vol.XLII, pp.61-85

Morton, A. (2004) 'Indicative versus subjunctive in future conditionals', *Analysis*, 64, pp.289-293

Murdoch, I. (1985) 'The Sovereignty of Good over Other Concepts', *The Sovereignty of Good* (London: Ark). Reprinted in Roger Crisp & Michael Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press)

Murdoch, I. (1992) *Metaphysics as a Guide to Morals* (London: Penguin)

Naraqi, M (n.d., Late 18th century) *Jami' al-Sa'adat* (The Collector of Felicities) [tr. Shahyar Sa'dat] *al Tawhid Islamic Journal* [online] Available at:
<http://www.al-islam.org/al-tawhid/felicities/3.htm> [Accessed 5 June 2010]

NASA, *The Planets* [online]. Available at:
www.solarsystem.nasa.gov/planets [Accessed 10 May 2009]

Newman, J.H. (1903) *An Essay in Aid of A Grammar of Assent* (London: Longmans, Green & Co.) [online] Available at:
<http://www.newmanreader.org/works/grammar/index.html> [Accessed 5 Jan 2011]

NNDB (Name Database) [online] Available at: www.nndb.com [Accessed 10 March 2009]

Noddings, N. (2003) *Happiness and Education* (Cambridge: Cambridge University Press)

Noddings, N. (2003) 'Is Teaching a Practice?', *Journal of Philosophy of Education*, Vol.37, No.2, pp.241-251

Noddings, N. (2007) [2nd edn.] *Philosophy of Education* (Boulder: Westview Press)

Nozick, R. (1968) 'Moral Complications and Moral Structures', *Natural Law Forum*, 13, pp.1-50

Nozick, R. (1981) *Philosophical Explanations* (Oxford: Oxford University Press)

O'Keefe, D. (2004) [ed.] *Economy and Virtue* (London: The Institute of Economic Affairs)

O'Neill, P. (2008) 'The Educational Theory of Quintilian (Marcus Fabius Quintilianus)' *NewFoundations* [online] Available at: <http://www.newfoundations.com/GALLERY/Quintilian.html> [Accessed July 2009]

Paul, R (1993) *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*, pp.319-332 (Sonoma: Foundation for Critical Thinking) reprinted as ch.13, Guy Axtell (ed.) (2000) *Knowledge, Belief and Character* (Lanham, Maryland: Rowman & Littlefield)

Perkins, D. (1999) 'The many faces of constructivism', *Educational Leadership*, 57(3), pp.6-11

Perry, J. & M. Bratman (eds.) (1999) *Introduction to Philosophy: Classical and Contemporary Readings* [3rd edn.] (Oxford: Oxford University Press)

Plato (various trs.) Hamilton, E. & H. Cairns (eds.) *Plato: Collected Dialogues*,
Nineteenth Printing (Princeton: Princeton University Press, 2005)

Pojman, L. (ed.) (2001) *Classics of Philosophy: Volume III The Twentieth Century*.
(Oxford: Oxford University Press)

Polanyi, M. (1958/1962) *Personal Knowledge: Towards a Post-Critical Philosophy*
(London: Routledge & Kegan Paul)

Pollock, J.L. & A.S. Gillies (2000) 'Belief Revision and Epistemology', *Synthese*,
vol.122, no.1/2, pp.69-92

Popper, K. (1945) *The Open Society and Its Enemies* (Abingdon: Routledge, 2005)

Popper, K. (1959) *The Logic of Scientific Discovery* (New York: Basic Books)

Principe, G. and E. Smith (2008) 'The Tooth, The Whole Tooth and Nothing but the
Tooth: How belief in the Tooth fairy Can Engender False Memories', *Applied
Cognitive Psychology*, 22, pp.625-642

Pritchard, D. (2004) 'The Epistemology of Testimony', *Philosophical Issues*, 14,
Epistemology, pp.326-348

Pritchard, D. (2005) 'Virtue Epistemology and the Acquisition of Knowledge',
Philosophical Explorations, vol.8, no.3, pp.229-243

Pritchard, D. (2007) 'Recent Work on Epistemic Value', *American Philosophical
Quarterly*, vol.44, no.2, pp.85-110

Psillos, S. (2009) 'On Reichenbach's Argument for Scientific Realism', *Synthese*, June,
pp.17-18

Putnam, H. (1973) 'Meaning and Reference' Reprinted in L Pojman (ed.) (2001)
Classics of Philosophy: Volume III, The Twentieth Century. (Oxford: Oxford
University Press)

Putnam, H. (1982) *Reason, Truth and History* (Cambridge: Cambridge University Press)

Quine, W.V.O. (1961) 'Two Dogmas of Empiricism' section 6 in *From a Logical Point of View*, reprinted in L. Pojman (ed.) (2001) *Classics of Philosophy: Volume III, The Twentieth Century* (Oxford: Oxford University Press)

Radin, M. (1937) 'On Legal Scholarship', *The Yale Law Journal*, vol.46, no.7, pp.1124-1141

Rees, M. (2010) 'What we'll never know', *Reith Lecture*, BBC Radio 4, 198m Long Wave, 15 June.

Ridley, M. (1996) *The Origins of Virtue* (London: Penguin)

Riggs, W (2010) 'Open-Mindedness', *Metaphilosophy*, vol.41, nos.1-2, pp.172-188

Roberts, R.C. & W.J. Wood (2007) *Intellectual Virtues; an Essay in Regulative Epistemology* (Oxford: Oxford University Press)

Rorty, A.O. (ed.) (1988) *Philosophers on Education* (London: Routledge)

Rorty, R. (1979) *Philosophy and the Mirror of Nature* (Princeton, NJ: Princeton University Press)

Roush, R. (2005) *Tracking Truth: Knowledge, Evidence and Science* (Oxford: Oxford University Press)

Rousseau, J-J. (1762) [tr. A. Bloom] *Emile* (London: Penguin Books, 1991)

Rousseau, J-J. (1762) [tr. Barbara Foxley] *Emile* (Project Gutenberg eBook)

Rowe, C. (1976) *An Introduction to Greek Ethics* (London: Hutchinson & Co.)

- Rowson, R. (2006) *Working Ethics* (London: Jessica Kingsley Publishers)
- Royal Society Website [online] available at:
<http://royalsociety.org/page.asp?id=6186>. [Accessed 1 May 2009]
- Rudduck, J. & Flutter, J. (2004) *How to Improve your School: Giving Pupils a Voice* (London: Continuum Books)
- Russell, B. (1961) *History of Western Philosophy* (London: Unwin University Books)
- Ryle, R. (1949) *The Concept of Mind* (London: Hutchinson)
- Schön, D.A. (1987) *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass)
- Scott, G.A. (ed.) (2007) *Philosophy in Dialogue: Plato's Many Devices* (Evanston, IL: Northwestern University Press)
- Schuurman, E. (1996) 'A Confrontation with Technicism as the Spiritual Climate of the West', *Westminster Theological Journal*, 58:1, pp.63-73
- Sipiora, P. (2002) 'Introduction: the Ancient Concept of *Kairos*', P. Sipiora & J.S. Baumlin (eds.) (2002) *Rhetoric and Kairos: essays in history, theory and praxis* (Albany: SUNY Press)
- Slater, B.H. (2004) 'Ramsey's tests', *Synthese*, vol.141, no.3, pp.431-444
- Slote, M. (1997) 'Agent-Based Virtue Ethics', R. Crisp & M. Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press)
- Sloterdijk, P. (1987) *Critique of Cynical Reason* (Minneapolis: University of Minnesota Press), p.xxix in D.E. Cooper 'Postmodernism', R. Curren (ed.) (2003) *A Companion to the Philosophy of Education* (Oxford: Blackwell)
- Soanes, C. & Stevenson, A (2009) *Concise Oxford English Dictionary* [revised 11th Edition] (Oxford: Oxford University Press)

- Smith, R. (1999) 'Paths of Judgement: The Revival of Practical Wisdom', *Educational Philosophy and Theory*, 31, 3, pp.327-340
- Sosa, E. (1980) 'The Raft and the Pyramid: Coherence versus Foundations in the Theory of Knowledge', *Midwest Studies in Philosophy*, vol.5, pp.3-25, Reprinted in E. Sosa, J. Kim (eds.) (2008) *Epistemology: An Anthology* [2nd Edition] (Oxford: Blackwell Publishing Ltd.) pp.145-164
- Sosa, E. (1985) 'Knowledge and Intellectual Virtue' *Monist*, 68, no.2 (April) p.227
- Sosa, E. (1999) 'How to Defeat Opposition to Moore', *Philosophical Perspectives*, 13, Epistemology, pp.141-153
- Sosa, E. (2007) *A Virtue Epistemology: Apt Belief and Reflective Knowledge*, vol.1 (Oxford: Oxford University Press)
- Sosa, E. & J. Kim (eds.) (2008) *Epistemology: An Anthology* (Oxford: Blackwell)
- Sosa, E. (2009) *Reflective Knowledge: Apt Belief and Reflective Knowledge*, vol.2 (Oxford: Oxford University Press)
- Sosa, E. (2009) 'Precis of A Virtue Epistemology', *Philosophical Studies*, 144, p.108
- Sosa, E. (2009) 'Replies to commentators on *A Virtue Epistemology* (Oxford University Press, 2007)', *Philos. Stud.*, 144, pp.137-147
- Sosa, E. (2011) *Knowing Full Well* (Princeton: Princeton University Press)
- Sperber, D., F. Clément, C. Heintz, O. Mascaro, H. Mercier, G. Origgi & D. Wilson (2010) 'Epistemic Vigilance', *Mind & Language*, vol.25, no.4, September, pp.359-393
- Standish, P. (2006) 'The Nature and purposes of Education', Randall Curren (ed.) *A Companion to the Philosophy of Education* (Oxford: Blackwell Publishing)

- Stevenson, L. (1993) 'Why believe what people say?', *Synthese*, 94, p.436
- Stewart, D. (1813) *The Works of Thomas Reid, DD, FRS, Edinburgh* (Charlestown: Samuel Etheridge jun'r). [Digitised by Google Books]
- Stocker, M. (1976) 'The schizophrenia of modern ethical theories', *Journal of Philosophy*, 73, pp.563-66. Reprinted in R. Crisp & M. Slote (1997) *Virtue Ethics* (Oxford: Oxford University Press)
- Stutz, C. & S. Tauer (2000) 'The Awakening of Intellectual Virtue', *Boston University Journal of Education*, vol.182, no.2, pp.37-44
- Taylor, C. (1991) *The Malaise of Modernity* (Concord, Ontario: House of Anansi Press Ltd)
- Taylor, C. (1989) *Sources of the Self: the Making of the Modern Identity* (Harvard: Harvard University Press)
- Taylor, C.S. (1998) 'Holzwege and Feldwege in Cyberwald: The Multimedia Philosophy Lecture', *Ejournal*, vol.8, no.1
- Taylor, G. & Wolfram, S. (1968) 'The Self-Regarding and Other-Regarding Virtues', *The Philosophical Quarterly*, vol.18, no.72, pp.238-248
- Thompson, C. (2005) 'The Non-transparency of the Self and the Ethical Value of *Bildung*', *Journal of Philosophy of Education*, vol.39, no.3, pp.519-533
- Thompson, C. (2006) 'Adorno and the borders of experience: the significance of the nonidentical for a "different" theory of *Bildung*', *Educational Theory*, vol.56, no.1, pp.69-87
- Thompson, J.A.K. and H. Tredennick (trs.) (1953, 2004) *Aristotle: The Nicomachean Ethics* (London: Penguin Books)

Uebel, T. (1998) 'Enlightenment and the Vienna Circle's Scientific World Conception', Amélie Rorty (ed.) *Philosophers on Education* (London: Routledge)

Uebel, T. (2009) 'Neurath's protocol statements revisited: sketch of a theory of scientific testimony', *Studies in History and Philosophy of Science*, vol.40, iss.1, pp.4-13

Uebel, T. (in press) 'Neurath's protocol statements revisited: sketch of a theory of scientific testimony', *Studies in History and Philosophy of science*.

Vogel, J. (2006) 'Subjunctivitis', *Philos Stud*, 134, pp.73-88

von Feuerbach, A. (1833) *An Account of an Individual Kept in a Dungeon, Separated From All Communication With the World, From Early Childhood to About the Age of Seventeen* [Translated from the German] (London: Simpkin & Marshall). Reprinted in <http://www.feralchildren.com> [online] [Accessed 19 April 2010]

von Wright, G.H. (1963) *The Varieties of Goodness* (London: Routledge & Kegan Paul)

Watts, G. (2010) *Moments of Genius*, BBC Radio 4, 198m, Long Wave, 12 Dec

Welbourne, M. (2002) 'Is Hume really a reductivist?', *Studies in History and Philosophy of Science*, 33, p.407-423

White, E.C. (1987) *Kaironomia: On the Will-to-Invent* (Ithaca, USA: Cornell University Press)

Whitehead, A.N. (1962) *The Aims of Education and Other Essays* (London: Ernest Benn Ltd)

Whitney, B. (2004) 'Mentors: benevolent fools or goddesses of power?' *Critical Quarterly*, vol.46, no.3, pp.111-115

Whorf, B. (1956) *Language, Thought and Reality* (Cambridge, MA, USA: MIT Press)

- Wilson, E.R. (2007) *The Death of Socrates* (London: Profile Books Ltd.)
- Wiesel, T.N. & D.H. Hubel (1965) 'Extent of recovery from the effects of visual deprivation in kittens', *J. Neurophysiol*, 28, pp.1060-72
- Wittgenstein, L. [tr. and ed. GEM Anscombe, GH von Wright & Denis Paul] (1951) [*Über Gewissheit*] *On Certainty*, (Oxford: Basil Blackwell) [online] available at: <http://budni.by.ru/oncertainty.html> [accessed 6 Sep 2010]
- Wittgenstein, L. (1953) *Philosophical Investigations* [tr. GEM Anscombe] (Oxford: Blackwell, 2001)
- Wolf, S. (1982), 'Moral Saints', *Journal of Philosophy*, 79, pp.419-39, reprinted in R Crisp & M Slote (eds.) (1997) *Virtue Ethics* (Oxford: Oxford University Press)
- Woodruff, P. (1998) 'Socratic Education' in A. Rorty (ed.) *Philosophers on Education* (London: Routledge)
- Wright, S (2009) 'The Proper Structure of the Intellectual Virtues', *The Southern Journal of Philosophy*, vol.XLVII, pp.91-112
- Wright, S. (2010) 'Virtues, Social Roles and Contextualism', *Metaphilosophy*, vol.42, nos.1-2, pp.95-114
- Wylie, C. (2000) *Trends in the feminization of the teaching profession in OECD countries 1980-1995* (Wellington: New Zealand Council for Educational Research)
- Yu, P. & G. Fuller (1986) 'A Critique of Dennett', *Synthese*, vol.66, no.3, pp.453-476
- Zagzebski, L. (1996) *Virtues of the Mind* (Cambridge: Cambridge University Press)
- Zagzebski, L. (2003) 'The search for the source of epistemic good', *Metaphilosophy*, vol.34, nos.1/2, pp.12-28

Zagzebski, L. (2007) 'Ethical and Epistemic Egoism and the Ideal of Autonomy',
Episteme: A Journal of Social Epistemology, vol.4, iss.3, pp.252-263

Zagzebski, L. (2010) 'Exemplarist Virtue Theory', *Metaphilosophy*, vol.41, nos.1-2,
pp.41-57

Appendix A: Summary of Intellectual Virtues and Vices in Aristotle, Sosa and Zagzebski

Aristotle: Complete List of Intellectual Virtues from <i>Nicomachean Ethics</i>
<i>Sophia</i> (Theoretical Wisdom)
<i>Nous</i> (Understanding)
<i>Epistēmē</i> (Theoretical Knowledge)
<i>Techne</i> (Technical Rationality)
<i>Phronēsis</i> (Practical Wisdom)

Sosa	Zagzebski	Zagzebski
Examples of Intellectual Virtues	Examples of Intellectual Virtues	Examples of Intellectual Vices
<ul style="list-style-type: none"> - ‘Faculty of colour vision’ (2007, p.31) - ‘The competence we exercise when we trust our colour vision in an ordinary case’ (ibid., p.32) - ‘Commitments [which] come courtesy of Mother Nature and her evolutionary ways, but many others must be learned.’ (ibid., p.85) - ‘A disposition to receive others’ say-so when we hear it or read it.’ (ibid., p.95) 	<ul style="list-style-type: none"> - ‘Adaptability of intellect’ (<i>VOM</i>, 1996, p.21) - ‘The ability to recognize the salient facts’ (p.21) - ‘Sensitivity to detail’ (p.21) - ‘The ability to think up explanations of complex sets of data’ (p.21) - ‘The ability to think up illuminating scientific hypotheses or interpretations of literary texts’ (p.21) - ‘Intellectual care’ (p.21) - ‘[Intellectual] discretion’ (p.21) - ‘Intellectual fairness’ (p.109) - ‘[Intellectual] caution’ (p.109) 	<ul style="list-style-type: none"> - ‘Mak[ing] hasty generalizations’ (<i>VOM</i>, 1996, p.5) - ‘Ignor[ing] the testimony of reliable authority.’ (p.5) - ‘Intellectual prejudice’ (p.148) - ‘Intellectual pride, negligence, idleness, cowardice, conformity, carelessness, rigidity ... wishful thinking, closed-mindedness, insensitivity to detail, obtuseness and lack of thoroughness, ... giving up too soon ... proneness to discouragement ... self-deception’ (p.152) - ‘... Intellectual rashness’ (p.152)

Sosa Virtues (cont.)	Zagzebski Virtues (cont.)	Zagzebski Vices (cont.)
<ul style="list-style-type: none"> - ‘stable dispositions for belief acquisition’ [including exotic alien belief-acquisition involving] ‘fields of force, waves, mathematical structures and numerical assignments to variables in several dimensions’ (1980, p.159) 	<ul style="list-style-type: none"> - ‘Open-mindedness in collecting and appraising evidence’ (p.114) - ‘Fairness in evaluating the arguments of others’ (p.114) - ‘Intellectual humility’ (p.114) - ‘Intellectual perseverance, diligence, care and thoroughness’ (p.114) - ‘The detective’s virtues: thinking of coherent explanations of the facts’ (p.114) - ‘Being able to recognize reliable authority’ (p.114) - ‘Insights into persons, problems, theories’ (p.114) - ‘The teaching virtues: the social virtues of being communicative, including intellectual candor and knowing your audience and how they respond’ (p.114) - ‘Originality and creativity’ (p.123) - ‘Curiosity’ (p.123) ‘[but] both Augustine and Aquinas call curiosity a vice’ - Intellectual courage (p.150) 	<ul style="list-style-type: none"> - ‘[Being] overly thorough, overly sensitive to detail, overly cautious’ (p.152) - ‘Hypocrisy’ (p.162) - ‘The vices of excess: excessive attentiveness, thoroughness, diligence, perseverance’ (p.196) - ‘Dogmat[ism]’ (p.207) - ‘[The] vice of being a chronic guesser [which] has no name’ (p.208) - ‘The unreflective acceptance of the opinions of others’ (p.305) - ‘Nosiness arising out of envy’ (p.314) - ‘Form[ing] a belief as the result of a desire for fame’. (p.321)

	<p style="text-align: center;">Zagzebski Virtues (cont.)</p> <ul style="list-style-type: none"> - ‘The virtue that is the mean between the questioning mania and unjustified conviction [which] has no simple name’ (p.154) - ‘Intellectual carefulness ... humility, vigor, ... insightfulness, and the virtues opposed to wishful thinking, obtuseness and conformity’ (p.155) [but] ‘ ... Aristotle would have thought of humility as a vice’ (p.88) - ‘Intellectual integrity’ (p.155) - [Intellectual virtues such as originality and inventiveness which] ‘... qualify as analogous to supererogatory moral traits’ (p.155) - ‘Autonomy’ (p.159) - ‘Trust is a mean between gullibility and suspiciousness’ (p.160) - ‘Boldness’ (p.181) - ‘Intellectual sobriety’ (p.185) - ‘[Newman’s] “illative sense”...’ (p.225) - ‘Proper trust of authority outside [one’s] area of expertise’ (p.319) 	
--	---	--

Appendix B: Table Showing How the Learner's and the Teacher's Epistemic Virtues Might Co-ordinate

This list the virtues relating to the learning and teaching situation, which have been discussed in this thesis. Here I show *possible* ways of co-ordinating relevant virtues between the learner and the teacher, but I make no claims for the table: it is merely illustrative. The choice of which virtue to embody in the concrete learning and teaching situation is a matter for the teacher, guided by her *phronēsis*.

Apart from the first set, each of the five others lists a loose collection of the virtues we may wish to foster in the learner under a particular heading, followed by a number of the virtues with which the teacher might be animated in response.

It is no substitute for the nuanced discussion on 'tallying' or 'co-ordinate' virtues to be found in the later chapters of this thesis, but I offer it to the reader in the hope that it is found to be helpful. If it is not, it can safely be ignored.

The Over-arching Teacherly Virtues

- *Phronēsis*.⁵⁹⁹
- *Sōphrosynē*.
- *Praotēs* (gentleness, good nature, patience [*doceur* in Agathon's list]).⁶⁰⁰
- *Philanthropia* (φιλανθρωπία, benevolence).
- 'The teaching virtues: the social virtues of being communicative, including intellectual candor and knowing your audience and how they respond' (*VOM*, p.114).⁶⁰¹
- 'Adaptability of intellect' (*VOM*, p.21).
- *Vorleben* – willingness to act as a worthy role-model.⁶⁰²
- *Technē* (in the sense of other-regarding pedagogical techniques; with the proviso that the deployment of these is ultimately governed by *phronēsis*).
- *Sungnōmē* (sympathetic judgement).
- *Sunesis* (understanding).⁶⁰³ The person who has such understanding 'thinks with the other and undergoes the situation with him'.⁶⁰⁴

⁵⁹⁹ Aristotle, *Nicomachean Ethics*, bk. VI, 5, 1140b4

⁶⁰⁰ Aristotle, *Nicomachean Ethics*, (tr. Thompson & Tredennick (1953, 2004) p.312

The Virtues of Doxastic Trust

Learner

- 'Being able to recognize reliable authority' (*VOM*, p.114).
- 'Intellectual humility' (*VOM*, p.114).
- 'Trust ... a mean between gullibility and suspiciousness' (*VOM*, p.160).
- 'Proper trust of authority outside [one's] area of expertise' (*VOM*, p.319).
- 'A disposition to receive others' say-so when we hear it or read it'.⁶⁰⁵

Teacher

- Veracity [or *parrhesia*] 'the propensity to be truthful when we tell other people what is what'.⁶⁰⁶
- 'Integrity (including an unwillingness to misuse one's status as expert)'.⁶⁰⁷
- *Eutrapelia* (wittiness: the mean between boorishness and buffoonery).⁶⁰⁸
- *Eirōneia* (irony, self-depreciation, understatement).⁶⁰⁹

⁶⁰¹ This can, I feel, be written as a combination of veracity and *sunesis*.

⁶⁰² Horsthemke and Kissak (2008) op. cit., p.280

⁶⁰³ Aristotle, *Nicomachean Ethics*, bk.6, ch.11

⁶⁰⁴ Gadamer (1975) op. cit., p.288

⁶⁰⁵ Sosa (2007) op. cit., p.95

⁶⁰⁶ Reid (1764) op. cit., p.419

⁶⁰⁷ Kawall (2004) op. cit., p.260

⁶⁰⁸ This enables the teacher to perpetrate Aquinas' 'jocose' lie, which, as well as giving pleasure, can also be useful in that it disrupts the dependency of the learner on the teacher's *parrhesia*.

⁶⁰⁹ *Eirōneia* is regarded by Aristotle as a vice of deficiency (the mean being *alētheia*, which we can gloss here as 'disclosure' Aristotle, *Nicomachean Ethics* (tr. Thompson & Tredennick (1953, 2004)), p.311.), but it can be an other-regarding epistemic virtue by way of playing down our own grasp of the truth in order to allow our beneficiary to find it for himself, in much the same way as Athene disguises her powers and holds back from full disclosure to enable Telemachus the opportunity to develop his own epistemic and character virtues. Homer, *The Odyssey*. But, 'Mock modesty, in the case of Socrates or Uriah Heap [Dickens' *David Copperfield*], can be seen as inverted boasting. It is clear that ... many of Socrates' contemporaries felt he acted in a superior or arrogant way towards his fellow citizens.' Emily R Wilson (2007) *The Death of Socrates* (London: Profile Books Ltd.) p.40

The Virtues of Enquiry

Learner

- 'Ability to think up explanations of complex sets of data' (*VOM*, p.21).
- 'Ability to think up illuminating scientific hypotheses or interpretations of literary texts' (*VOM*, p.21).
- 'Ability to recognize the salient facts' (*VOM*, p.21).
- 'A sensitivity to detail' (*VOM*, p.21).
- 'The detective's virtues: thinking of coherent explanations of the facts' (*VOM*, p.114).
- 'Insights into persons, problems, theories' (*VOM*, p.114).
- 'Open-mindedness in collecting and appraising evidence' (*VOM*, p.114).
- 'Newman's "illative sense" ...' (*VOM*, p.225).
- 'Adaptability of intellect' (*VOM*, p.21).
- 'Curiosity' (*VOM*, p.123).

Teacher

- 'Fairness in evaluating the arguments of others' (*VOM*, p.114).
- 'Sensitivity to detail' (*VOM*, p.21).
- 'Intellectual fairness' (*VOM*, p.109).
- 'Intellectual humility' (*VOM*, p.114).
- 'Insights into persons, problems, theories' (*VOM*, p.114).
- 'Reflexive critical openness', a virtue which enables us to avoid 'epistemic injustice – that is, failing to believe people when they ought to be believed, but also believing someone who ought not to be believed'.⁶¹⁰

⁶¹⁰ Miranda Fricker, op. cit., p.176

The Virtues of Creativity

Learner

- ‘Originality and creativity’ ... (*VOM*, p.123).
- Intellectual virtues such as originality and inventiveness which ‘... qualify as analogous to supererogatory moral traits’ (*VOM*, p.155).
- ‘Intellectual courage’ (*VOM*, p.150)
- ‘Intellectual boldness’ (*VOM*, p.181).
- ‘Intellectual vigor’ (*VOM*, p.155).
- ‘Intellectual Autonomy’ (*VOM*, p.159).
-

Teacher

- ‘Creativity (which can inspire others, and lead to the discovery of new truths in a community)’.⁶¹¹
- ‘...the skills of a good listener (and critic) insofar as they help other epistemic agents to articulate and examine their own beliefs carefully and lucidly’.⁶¹²
- A willingness to act with *Maieusis*.⁶¹³

⁶¹¹ Kawall (2004) op. cit., p.260

⁶¹² *ibid.*, p.260

⁶¹³ Plato, *Theætetus*, 149-152

The Virtues of Scholarship

Learner

- '[Intellectual] perseverance, diligence, thoroughness' (*VOM*, p.114).
- '[Intellectual] care' (*VOM*, p.21).
- '[Intellectual] caution' (*VOM*, p.109).
- 'Intellectual integrity' (*VOM*, p.155).
- 'Intellectual sobriety' (*VOM*, p.185).
- '[Intellectual] discretion' (*VOM*, p.21).
- 'Virtues opposed to wishful thinking, obtuseness and conformity' (*VOM*, p.155).
- '[Intellectual] fairness' (*VOM*, p.109).
- 'Virtue that is the mean between the questioning mania and unjustified conviction [which] has no simple name' (*VOM*, p.154).
-

Teacher

- 'The ability to recognize the salient facts' (*VOM*, p.21).
- Sincerity.
- *Praotēs* (gentleness, good nature, patience).⁶¹⁴
- 'Proper trust of authority outside [one's] area of expertise' (*VOM*, p.319).
- Epistemic Justice.⁶¹⁵
- 'Sensitivity to detail' (*VOM*, p.21).s

⁶¹⁴ Aristotle, *Nicomachean Ethics* tr. Thompson & Tredennick (1953, 2004) p.312

⁶¹⁵ Miranda Fricker (n.d) op. cit., p.176

The Social Intellectual Virtues

Learner

- ‘Social virtues of being communicative, including intellectual candor and knowing your audience and how they respond’ (*VOM*, p.114).
- Veracity [or *parrhesia*] ‘the propensity to be truthful when we tell other people what is what’.⁶¹⁶
- ‘A disposition to receive others’ say-so when we hear it or read it’ (Sosa, 2007, p.95).
- ‘Fairness in evaluating the arguments of others’ (*VOM*, p.114).
- ‘Proper trust of authority outside [one’s] area of expertise’ (*VOM*, p.319).
- ‘Reflexive critical openness’, a virtue which enables us to avoid ‘epistemic injustice – that is, failing to believe people when they ought to be believed, but also believing someone who ought not to be believed’.⁶¹⁷

Teacher

- *Vorleben* – willingness to act as a worthy role-model.
- Solicitude in determining the epistemic predicaments of our students.
- *Eleutheriotēs* (liberality, generosity).⁶¹⁸
- Intellectual charity.
- ‘Reflexive critical openness’
- A sense of *Eukairos*.
- Provocativeness ...⁶¹⁹
- *Praotēs* (gentleness, good nature, patience).

⁶¹⁶ Reid (1764) op. cit., p.419

⁶¹⁷ Miranda Fricker (n.d) op. cit., p.176

⁶¹⁸ Aristotle, *Nicomachean Ethics* (tr. Thompson & Tredennick (1953, 2004)) p.311

⁶¹⁹ Plato, *Republic*, 523b-c