ON LEARNING VOLUME 3

Knowledge, curriculum and ethics

David Scott

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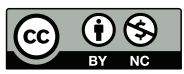

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Preface

This is the third of three books – *On Learning: A general theory of objects and object-relations* (Scott, 2021), *On Learning, Volume 2: Philosophy, concepts and practices* (Scott, 2024) and *On Learning, Volume 3: Curriculum, knowledge and ethics* – that together form continuations of an argument that has only found its fullest expression in this final volume. What this means, and I say this with some regret, is that the arguments expressed in volumes 1 and 2 are in places inadequately developed or badly expressed or just plain fallacious. In some bodies of knowledge by a single person, a claim is made that all of its parts are true and error-free, and that they refer to different elements of the problem being addressed, or that they operate at different levels or strata of the social world, or as different elements in a general social theory.

For example, Roy Bhaskar, a philosopher with whom I worked closely, claimed that the three phases of critical realism were logical extensions of each other and not better, and more correct, readings of a central problem in social theory. His first book, *A Realist Theory of Science*, was published in 1975 (Bhaskar, 1997). In it, he focused on the natural world, with this being followed by its counterpart, *The Possibility of Naturalism* (1979) (Bhaskar, 1998), which focused on the social world. Shortly after, he published a third book, *Scientific Realism and Human Emancipation* (1987) (Bhaskar, 2010), and here he argued for a strong programme of explanatory critique and ontological realism. Together, these three books laid the basis for what he called basic (or original) critical realism. In turn, his philosophy of basic or foundational critical realism resulted in the publication of two further books: *Reclaiming Reality: A critical introduction to contemporary philosophy* (1989) (Bhaskar, 2011a) and *Philosophy and the Idea of Freedom* (1991) (Bhaskar, 2011b).

In 1993 a new phase in critical realism, which he called dialectical critical realism, was initiated by the publication of *Dialectic: The pulse of freedom* (1993) (Bhaskar, 2008) and, a year later, by that of *Plato etc.: The problems of philosophy and their resolution* (1994) (Bhaskar, 2009). These books developed the ontology and conceptual framework of dialectical critical realism, while at the same time offering a critique of the whole trajectory of Western philosophy. In 2000, he inaugurated a new phase of critical realist philosophy, in what become known as the

spiritual turn, with the publication of *From East to West* (Bhaskar, 2000). This was quickly followed in 2002 by three books in quick succession, *The Philosophy of MetaReality: Creativity, love and freedom*; *Reflections on MetaReality: Transcendence, enlightenment, and everyday life*; and *From Science to Emancipation: Alienation and the actuality of enlightenment* (Bhaskar, 2002c; 2002d; 2002b), which together provided the foundations for a third phase of critical realism, metaReality, a phase which combined a strong critique of modernity with a radically new account of the self, social structuring and the universe. There is a seamlessness about this body of work, or so it is claimed. I am making no such claim about the trilogy of books that I have written, only that they focus on a central concern of social theory, or at least what, I am claiming, should be a central concern of social theory, that of learning.

In all three books I have used a variety of textual devices (referentiality, linearity, fragility, corrigibility, enframing and coherentism), and I want to draw attention to some of them here. The first of these is the insertion of a large number of references – an unusually large number – to other chapters in the book. This is designed to show that every concept being used here has a referential structure, in that every conceptual (and thus semantic) activity is framed and then reframed in relation to the possibilities that inhere in the concept and in a network of other concepts. This demands a complicated reading of these texts, although no more difficult than reading an encyclopaedia, dictionary or work of reference. The point of this is to suggest or show that one important part of the argument that I am making is that meaning, or the semantic dimension, is both dynamic and embedded within a network of other concepts, with their own semantic possibilities.

A second device that I have used here is more traditional. This refers to the linear structure of the text, in which a series of premises are introduced and justified, connections and relations are established between them, and conclusions are then drawn. In contrast, Ludwig Wittgenstein organised his material in the two books that are the best expressions of his later philosophy, *Philosophical Investigations* (Wittgenstein, 1953) and *On Certainty* (Wittgenstein, 1969), in units of remarks. In the first paragraph of the Preface to the *Investigations*, he suggested that: 'I have written down all these thoughts as remarks, short paragraphs, sometimes in longer chains about the same subject, sometimes jumping, in a sudden change, from one area to another' (Wittgenstein, 1953: iii), and he qualified this in the second paragraph, after first suggesting that he had tried to write philosophy in a conventional manner, in the following way:

> … my thoughts soon grew feeble if I tried to force them along a single track against their natural inclination. – And this was, of course, connected with the very nature of the investigation. For it compels us to travel criss-cross in every direction over a wide field of thought. – The philosophical remarks in this book are, as it were, a number of sketches of landscapes, which were made in the course of these long and meandering journeys. (Wittgenstein, 1953: iii)

This hypertextual mode has a non-linear structure. The textuality that it implies mirrors the structure of the substantive argument that is being made and is not solely the result of Wittgenstein's natural modesty. My textuality in this book, and in the trilogy of books, then, is a more conventional type. I have set out an argument, and the elements that make up this argument, and nothing more; that is, I have been making a case for a particular viewpoint about knowledge and learning and what they refer to.

A third device concerns the fragility of the writing, and what I mean by this is the sense in which I as the author have had to struggle throughout (this book and the trilogy) with finding the right words, sets of words, sentence constructions, paragraph arrangements and so forth that can approximately bridge the gap (an ever-present and always changing gap) between the text that I have produced and what it refers to outside of the confines of the text itself. If we abandon the idea of categorical and timeless definitions of words that represent in some magical way what is out there in the world, then the attempt at writing the world into being is always a struggle and always insufficient. The point I am making is that this is not a confession of inadequacy but an acknowledgement that my words, word-sets, sentences and paragraphs are never adequate or sufficient and cannot be so given the task that is being attempted, although most writers addressing issues to do with learning are unaware of this.

A fourth device that I have used here is to discuss at all times, and in as many ways as I can, the issue of corrigibility. Am I correct in what I say? Am I producing truthful knowledge? Is this the best I can do? If I want to criticise a position taken by someone else, or if I want to make a claim that this other position is insufficiently evidenced or superficially formulated or conceptually inadequate or logically deficient, then I can only do this by comparing it with a position which is evidenced or in depth or conceptually adequate or logically sufficient. In short, I need criteria about truthful knowledge in order to make a judgement about

a position or approach. If I want to correct an idea, then I have to have some foundation from which to do it.

A fifth textual and methodological device is that in every word, word complex, sentence, paragraph and chapter in these three books, I have made a series of assumptions about the world and my knowledge of it; some of these assumptions are explicit, some are not. These preconceptions can be broadly summarised as a realist theory of ontology, and thus of epistemology, an ontic and epistemic theory of valuations, that we can know the world but only with the greatest of difficulty, and that these key ontological objects, knowledge and the world, are central to any understanding we may have. This textual device is used by me throughout the books, and it is of some significance.

A final textual and methodological device that I have used extensively in this trilogy of books is to set a series of general arguments against other arguments developed by other people. The point is that this is what most philosophers and thinkers actually do, even if they do not always make it explicit. This leaves open the possibility that we could write a history, archaeology or genealogy of learning without such referencing, and, indeed, there must have been a time in which every thought was new or at least not related to what other people said. What you are about to read is a text, and a particular type of text. As a text, I have argued throughout, it is a signifying practice, and, as a signifying practice, it has to question its own textuality and, indeed, the discursive contents that it is committing to, a practice that is now barely adhered to by most writers in the field of learning.

1
Introduction

My principal focus in the three books that constitute this trilogy on learning, *On Learning: A general theory of objects and object-relations* (Scott, 2021), *On Learning, Volume 2: Philosophy, concepts and practices* (Scott, 2024), and *On Learning, Volume 3: Curriculum, knowledge and ethics*, is the lived experience of human beings. Learning, then, has two principal forms, as a linguistic descriptor and as an event or episodic series of events in the world. There are connections and relations between them, however, and these will be central to the argument I am making, as will be the notion of enframing or framing in a Heideggerian sense.[1] Any claim to knowledge or any utterance made by a person is enframed, and this requires us to articulate and give expression to this enframing as it relates to all those issues, utterances and occurrences that we might want to place within ontological, epistemological and methodological domains; consequently, any knowledge claim is enframed by a meta-epistemic theory, the type of object or objects it makes reference to, and how it can be justified. This incorporates a theory of mind, and therefore a theory of the relationship between mind or minds and the world, and conversely between the world and mind or minds.

As I suggested in the first two books of this trilogy, there are five object-types in the world: discursive objects, material objects, relational objects, structural-institutional-systemic objects and people. In an object-ontology, human beings[2] have learnt dispositions or

[1] In the German that Heidegger wrote in, he used the word *Gestell*, which translates as frame, positioning, underpinning, stand or enframing (see Heidegger, 1962).
[2] The word *object* is being used here to indicate a sense of being different from another object or entity, and not to suggest that human beings do not have volitional and intentional dimensions.

properties. These are conceptual relations in human beings, which cannot be fully determined as to their meaning in definitional and essentialising ways, but only in terms of how they are used. What follows from this is that we can and should understand and use concepts specifically in relation to antecedent, contemporaneous and applied constellations[3] or networks of meaning (and this in turn requires us to give an account of the different relations that there are and can be between our utterances and these networks). Operating within this space involves the giving and asking for reasons, where this activity is understood as making a commitment in the world, with that commitment referring to the circumstances surrounding its content and its consequences.[4] We make different types of commitments to the different types of meanings that are embedded in our three networks, and consequently when we try to explicate semantically our utterances and commitments, we have to pay attention to the different modes of reasoning in each of them.

This means that we are committing to the idea that the meaning of a concept rests with three primary networks or constellations of meaning: a framework which is past-oriented, and thus refers to the antecedents of the concept; a framework of other and contemporary concepts, where a key concern is the notion of relevance; and a framework of how the concept we are concerned with is used or can be used in the present. There is a need to distinguish between different types of concepts because if their functionality is different, then we can only use them in different ways. For example, foundational concepts can be distinguished from peripheral concepts, in relation to how important they are in the argument that is being made or as a part of a discursive configuration. Learning is a foundational concept in most knowledge-claiming activities. All concepts are normatively and ethically framed, and what this means is that every time we use a concept, discursively or as a praxis, we are giving a value to something in the world. However, some concepts are strongly framed as value-carriers, while others are only weakly framed. Some concepts have a supersessional form and consequently are hierarchically arranged; others do not. In our judgements, or in the judgements we choose to make, if we want to understand the meaning of a concept, we have to show how it relates to other concept-meanings and how relevant they are. These relations are object-specific and determine how objects interact and are constructed.

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[3] A constellation in the sense that I will be using it here arises out of a conjunction of elements that are relevant to a situation, a setting, a process, a text. The philosopher Walter Benjamin (see, for example, Benjamin, 2007) used the word extensively in this way.

[4] See Brandom (1994; 2000; 2004).

The issue, then, is how our three constellations function in the world. They work in different ways. The first, the antecedent network, is contentful only insofar as conceptual objects have already passed on their meanings to other meanings and meaning structures, although this cannot rule out sets of inferential relations persisting into present and future actions. As we articulate a belief, we also articulate the origins of that belief, and this means that in deciding to do something, we are also searching for a reason as to why we should do it, and this in turn means that we are distinguishing between good and bad reasons for its application. Consequently and ineluctably, we are exploring and resourcing from a network of interactive meanings and concepts that have already been used in the world.

The second nexus or framework has the virtue of being present to any deliberations we might make, although we may not be aware of all its manifestations. This is a store of conceptual meanings – the contents of our utterances – that exist in books, on the internet, in speech patterns, in communication devices, in the use of words, sentences, paragraphs and texts, in ordinary and everyday talk, in all forms of writing and thinking and more. This store of meanings contains contradictions, disputes, divisions, plurisemantics, temporal plays and the like. The network or nexus is variegated, interconnected and ever-present in our utterances in the world and, more importantly for our purposes here, it allows us to decide between good and bad reasons for decisions we make that lead to actions, whether contemplative or praxical.

The third nexus or framework is the use function of concepts and conceptual framings in the world. This clearly has a connection to, although it is not the same as, the other two frameworks, with these inferential relations operating in different ways. The guiding point of our actions in the world is both denotative and performative,[5] so that in operating in the world (being, thinking, doing, saying, uttering), we are being conceptually active and acting on conceptual meanings. We cannot avoid this. Concept-use and framing can best be understood by examining an argument or set of reasons for doing something in the world, such as inquiring, representing, supersessioning or referencing.

[5] A denotative utterance attempts to correctly identify an object or objects in the world and its functioning in real life. A performative utterance is either a performative act, such as a promise, or an attempt at changing what is in the world through the utterance.

Inquiring

University Challenge is a British television quiz programme. It was shown originally on ITV, and then on the BBC from 1994 to the present day. Teams consist of four members, currently undertaking a degree at the university that has entered the competition. The exceptions to this rule are colleges from the universities of Oxford, Cambridge and London, which enter independent teams. Teams are selected by the show's producers on the basis of scores achieved in a general knowledge quiz and on their suitability for appearing on television. The Russell Group of elite universities has been heavily over-represented in the selection of universities and in the eventual winners. This signifying practice or set of practices is underpinned by an inegalitarian view of knowledge and intelligence, and a sense of elitism and differentiation.

The contestants are identified by their surnames throughout, except at the beginning of the programme, a practice common to elite private schools,[6] and originating in them. The teams are generally of mixed sex, although biological males are over-represented to a considerable degree. The reasons for this can only be speculated about, but may include the following: unconscious biases in the selection process, a reluctance by women to perform in the ways required of them, a bias in the types of questions asked, and unequal numbers of potential male and female students at elite universities in the UK. Most of these contestants are undertaking first degrees, although some university teams have a greater proportion of mature students.

Starter questions are answered individually (via a buzzer) and are worth ten points. If the question is answered successfully, the team is asked a set of bonus questions, which are thematically linked and worth five points each. There are a small number of exceptions to this general rule. In the course of each game, there are two picture rounds and one music round. At the end of a game, the team with the highest score is declared the winner. In the event of a tied match, a sudden death question is asked, and the team that answers it correctly is declared the winner. This popular quiz show, replicated in other parts of the world, has a number of hidden features, for example, a reconstituting and a reinforcing of the notion of intelligence as the ability to answer a particular set of questions in a particular way – the types of questions and their correct answers stand in for a certain type of knowledge, which then

[6] Commonly, but misleadingly, known as public schools.

becomes hegemonic. Here are seven *University Challenge* questions that have been asked on the programme, and which I think are typical.

The first one I have set out in verbatim form, as I do with the rest of the questions: '"We must leave on time – from now on, everything must function to perfection" – whose words were these, spoken to a station-master and quoted in 1939, part of the mythology that the trains always ran on time under fascist dictatorships?' The answer is Mussolini. The actual quotation from Mussolini may not be well-known; however, what is well-known is the claim made by the fascist government of Italy between 1922 and 1943 that this form of governance, a heavily authoritarian one, was the only type that could effectively make the trains run on time – an efficiency and functioning claim. The quotation is placed at the front of the question, the reference in the second half of the question. This is deliberate, so as to encourage a team member to ring their buzzer, and lose points with an incorrect answer, because the reference to the correct answer is vague and insubstantial at the beginning, whereas it is clear and substantial in the second part of the question. The other important point to notice about this question is that it is constructed so that there is only one right answer, an actual person. There cannot be any equivocation about this answer. And further to this, the question and the answer are framed within an event(ing) perspective on the world – there are historical occurrences, which precede and succeed each other, and language can give a transparent and correct account of these occurrences.

A second question actually used in this series of programmes is as follows: 'Which village near Vienna is the site of the hunting lodge where the Habsburg crown prince Rudolf and his paramour Mary Vetsera committed suicide in mysterious circumstances in 1889?' The answer is Mayerling. As with the first question, there are elements of actual historical events that can be known or at least expressed in language transparently, with unequally difficult clues to the correct answer given at different points in the question. For example, it is much more likely that the suicide of the Habsburg crown prince and his lover would be known to a group of students educated in a British university than that this suicide pact took place in a village near Vienna in a hunting lodge. The other noteworthy features of this question are the use of the word 'paramour' and the inclusion of and stress on the mysterious features of the joint suicide pact itself. So, this is a question about the importance in any serious study of the history of royalty – other suicidal pacts are of lesser importance – and about how royal liaisons of a sexual nature are treated differently in language than ordinary everyday such

occurrences – they were illicit, in the sense of breaking the rules of being royal lovers, and thus their affair was deemed to be paramouric. In addition, the phrase 'in mysterious circumstances' is used not just to indicate a lack of knowledge about a state of affairs, but also that the story was one of mystery, placing this event in the genre of historical fiction in which a crime is committed and a solution to that crime is suggested, with the reader or viewer turned into a detective trying to figure out the who, what, when and how of a particular crime or breaking of rules, royal or otherwise.

A third question used in an episode of *University Challenge* was as follows: 'What name is that of an Arian Germanic people who maintained a North African kingdom in the fifth and sixth centuries and who, under their king, Gaiseric, sacked Rome in 455?' The answer is Vandal. This self-evidently is a naming question, and therefore has a single right answer. The twist in the question is that the answer refers both to a historical figure and to a person who deliberately destroys or damages property belonging to others, with the second definition having a relationship with the first. The reason that this is important in a question is that the answer as a disposition is well-known, whereas the genealogical element is less well-known. This allows the question to be other than a straightforward historical specialist question.

A fourth question was as follows: '"In the darkening twilight I saw a lone star hover gem-like above the bay" – this was the last diary entry of which explorer, written on January 5th, 1922, at Grytviken in South Georgia?' The answer is Ernest Shackleton. This is another question which only requires a name for an answer, in this case, the name of a person. There can be only one right answer. In order to answer it, we are given a variety of obscure and less obscure facts about a particular episode in the history of exploration: a diary entry, the date of the diary entry, the place at which it was written and so on. The question deviser could have included a number of better known clues to allow us to identify the person, such as that on an earlier expedition he had attempted to cross Antarctica from sea to sea via the South Pole, or that his ship on that expedition was named *Endurance*, and became trapped in pack ice and finally sank in the Weddell Sea off Antarctica in 1915. This would have made the question too easy, with ease of answering it understood in relation to a general familiarity with some aspects of the story. The knowledge required to answer it is essentially superficial: it tells us very little about the nature of polar explorations, for example, how they were construed as races to reach the two poles of the earth. These types of questions are fact(ing) exercises.

Another question asked on a *University Challenge* programme was: 'Sao Vincente, Boa Vista and Santiago are among the islands of which republic? – It gained its independence from Portugal in 1975, has a population of around half a million, and is situated around 600 kilometres from the coast of West Africa.' The answer is Cape Verde. This question is another of those questions where clues as to the correct answer are embedded at different points in the question, and with different levels of difficulty. There are therefore different amounts of risk involved with regard to when the contestant should buzz in their answer, given that this is competitive, and they should buzz in before their opponents. Those different clues in order of difficulty are: the names of the islands, the governance relations of those three islands as a republic, previously being a Portuguese colony, the population size of the republic, and its geographical location. However, each of these clues is framed as a fact, with only one correct answer possible.

A sixth question used on a *University Challenge* programme is as follows: '*The Strangest Man* by Graham Farelo is a 2009 biography of which scientist, who applied Einstein's theory of relativity to quantum mechanics in order to describe the spin of an electron? – In 1933, he shared the Nobel Prize for Physics with Erwin Schrödinger.' The answer is Paul Dirac. Yes, this is obscure in itself, even for a specialist audience. It is also a question that has several levels of difficulty: the name of the book, the author of the book, that it is a biography of a scientist, that this scientist used Einstein's theory of relativity to give an explanation for a physical observation, and, finally, that this scientist was awarded the Nobel Prize in Physics, shared with another physicist, who is very well known – Erwin Schrödinger, through his cat thought experiment.[7] The question is also one of those questions that demands a correct unequivocal answer, placing it within the knowledge framework and truth silo of Wikipedia, for example. The world can be known through and with a set of facts, which cannot be disputed.

The final question that we need to examine is as follows: 'Often featuring in photographic illusions caused by forced perspective, which structure was begun in 1173 as the third and final structure of its city's cathedral complex? – Designed to be 56 metres high, improvements to

[7] A cat, a flask of poison and a radioactive source are placed in a sealed box. If radioactivity is detected (that is, a single atom decaying), the flask breaks, releasing the poison, which kills the cat. An interpretation of this implies that, after a while, the cat is simultaneously alive and dead. Yet, if one looks in the box, one sees the cat either alive or dead, not both alive and dead. This suggests that there is a problem as to when quantum superposition ends and reality resolves into one possibility or the other.

the foundations since 1990 have diminished its distinctive aberration.' The answer is the Leaning Tower of Pisa. Although not given as such, the best clue refers to the object's distinctive aberration, that it is a building which has a dimension that is outside of what you would normally expect, and this clue is placed at the end of the question. The first clue is a strange one, in that the real object is represented as an optical illusion by photographers, even though it has no distinctive character that we might want to describe as illusory.[8] The second clue is a date when the building was begun, and that it was a part of a cathedral complex. Both of these are not as clear-cut as they seem to be: the date is earlier than one would expect, and the association with a cathedral is not obvious to the uneducated eye. Two other clues are given: its height, and the fact that structural conservation work has led to reductions in its lean over the last 35 years. As with all these questions, it has a single unequivocal answer, and can easily be placed in what I am calling a fact(ing) discourse.

These questions, and all the questions that are asked on the show, are, with some exceptions, similar in type, in that they demand a single right answer, can be placed in an empiricist/technicist frame, and offer a superficial account of the world and of learning. They also have a truth component attached to them by virtue of the question–answer format and the real-life setting that they are embedded within. There are many types of questions that can be asked, and these types are always enframed in a particular relationship – a particular question is related in some or other way to a particular answer. What is key, therefore, is these relationships, whether they are enhancing (the relationship between question and answer is that the answer is intended to provide a fuller account of the proposition in the question), confirmatory (here, the answer is intended to confirm the correctness of the question), or illuminative (this relationship is different from an enhancing relationship, because the intention is not just to give an account of an enhancement but, in addition, to place that account in a new and different frame). Other types are: reductive (here, the intended relationship is that of a semantic reduction, where some meaning is lost); closed (the contents of the answer are limited to a small number of cases); open (the contents of the answer are not restricted in this way); explanatory (here, the function of the relation is to make clear or transparent something which is obscure or complicated); taxonomic (to arrange in

[8] To describe something as illusory, as many psychologists want to, is to suggest that we are deceived in some way or another, rather than that our observations are apperceptively processed – see Chapter 3.

some order of importance); or criteriological (this relation is intended to place an object, a thing or a person, in a hierarchy of other objects, things or persons). Further relationships might be: meaning-making (here, the intention of the question–answer sequence is to bring out the semantic implications of the question); phenomenological (where the intentions or purposes of the question–answer sequence is to elicit the experiential implications of the question); epistemological (with this type of question–answer complex, the intention is to create a new contentful form of knowledge); evaluative (here, the issues of valuing and valorising are to the fore in the question–answer relation); metaphysical (the content of the relationship is fundamentally about notions of reality, identity and world–mind, mind–world relationships); hermeneutic (here, we are concerned with relations of interpretation, semiotics, pre-understandings and pre-formations); transgressive (where the intention of the relationship between question and answer is oppositional and deconstructive); or even consequential (the intention is to provide an account of the consequences that are embedded in the question, the consequences of a praxis or an enactment). There are others.

It is important to provide examples of these relationships in the format of question–relation–answer. An example of an enhancing relationship is: What is learning? – enhancement – the acquisition of knowledge, skills, dispositions or embodiments through study, experience or being taught. An example of a confirmatory relationship is: Did the school bell ring at 9.00 a.m. this morning? – confirmation (or disconfirmation) – yes (or no). An example of an illuminative relationship is: What is the purpose of education? – illumination – education is the engine of our economy, the foundation of our culture and an essential preparation for adult life. An example of a reductive relationship is: What is good teaching? – reduction – Q = C + E [Ks + Kt] + I, where quality depends on committed teachers (C), plus effective pedagogy (E), based on subject knowledge (Ks) plus knowledge of effective teaching (Kt), supplemented by imagination (I) (Husbands, 2017).

An example of a closed question is: In cytogenetics, what term describes the entire chromosomal complement of a cell which may be observed during mitotic metaphase? – closure – karyotype.[9] An example of an open question is: How would you describe yourself? – open response demanded – I am six feet tall, male, over 70 and so forth.

[9] A question–answer sequence taken from an actual *University Challenge* programme.

An example of an explanatory question could be: What does the word and concept of pedagogy mean? – explanation – the object to be learnt has logical and other types of inferential connections and relations with the way it can be learnt, and thus its pedagogy is derived from the constitution of the learning object, its learning modus operandi, and the characteristics of the learning environment. An example of a taxonomic or criteriological relationship between a question and an answer is: What is a taxonomy of educational objectives? – an ordering relationship – there are three learning domains: the cognitive, the affective and the psychomotor. An example of a meaning-making relationship is: What is the set of meanings that we can give to the knowledge/learning complex – semantic relation – knowledge and learning, as meta-concepts, are positioned in various networks or constellations of meaning, principally, the antecedents of the concepts, their relations to other relevant concepts, and the way the concepts are used in the lifeworld.

An example of a phenomenological sequence of a question–relation–answer is: What is it like to be free? – experiential relation – it is the feeling of being able to do what you want, without fear or hesitation. An example of an epistemological relation is: How do we know what we think we know? – epistemic contentful relationship – through empiricism, sense experience (rather than life experience) gained through observation and experiment becomes the given, the source or grounding of knowledge. An example of an evaluative or normative relationship might be: What is the good life – evaluative or normative transformational relationship – values-driven engaged activities and healthy bounded relationships provide the foundation for human flourishing and what is called the good life. An example of a contentful metaphysical relationship is: Who am I? – metaphysical relation – I am a bundle of experiences and perceptions that stretch over time.

An example of a hermeneutical relationship is: How do I interpret what you have just said? – contentful hermeneutic relation – by surfacing those undercurrents that structure what we say and what you have just said. An example of a transgressive relationship between question and answer is: How many people attended the meeting you just addressed? – transgressive relation – it depends on what you mean by a person. And, finally, an example of a consequential relation is: Is the sun shining today? – consequential relation – I can therefore hang my washing outside in my garden. These are different types of relations that can be construed from different question–answer sequences, and there are more. Concept framing also has representational qualities.

Representing

Vincent van Gogh's *Yellow Books* is one of a series of paintings, also known as the *Parisian Novels*, which he painted in 1887. (It is reproduced on the cover of this book.) The colour yellow is dominant, with some browns and reds in the background. In the foreground, there is a thin black depiction of a sunflower in a glass of water, seemingly dying. The painting focuses on a pile of books on the floor, untidily arranged, discarded, having been read. The books, because they are the same colour as the background wall and floor, are not clearly differentiated from their surroundings, giving the impression of sameness and identity – all objects are the same, to be used and then put to one side. The painting is about something, and there are clues as to what this might be – the yellowness of the objects, the curl of the books, the positioning of the books in relation to the background, the solitary sunflower on the edge of the painting. This painting is not a photographic depiction of a series of objects in a domestic setting. What the painting is trying to show is a set of emotions and valuations, such as decaying, time passing, discarding, disposing of, dispensing with, and relinquishing. Books contain knowledge, in this case, literary knowledge – we know this from the title of the set of paintings. The painting is saying something about the ephemerality of knowledge and learning.

In the Rubin vase picture (Figure 1.1), we are confused about whether we should concentrate on the figure (the principal object) or the background (the surrounds). Depending on whether we see the black or the white surface as the object, and thus the white or the black as the background, we will see a different picture – either two faces in profile or a vase. This so-called illusion is not really an illusion at all. It is a commonplace depiction of an object or set of objects that we can interpret in at least two different ways. In our reading, in our perception, of the object – a picture of something (which has already gone through a mediating process) – we choose to recognise it as a vase or as two faces in profile. There is no deception involved, as psychologists would have us believe, as this would involve us in beliefs that are physicalist and deagentising. It is also an affirmation of a process view of perception.

In the refraction image (Figure 1.2), the pencil appears to be broken, or in two parts. A physicalist explanation is perfectly adequate. When a light wave travels through the air and hits or comes into contact with water, some of the light waves are reflected off the water. The rest of the light waves pass through the water, and bend or refract on entry to the water. We therefore have here two potential images: an imagined

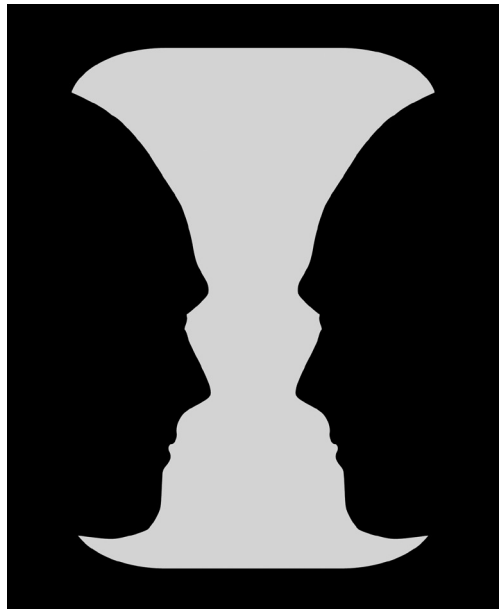

Figure 1.1 Rubin vase (Source: Ataturk.svg: NevitNevit Dilmen, CC BY-SA3.0 Wikimedia Commons)

Figure 1.2 Refraction in a glass of water (Source: Meganbeckett27, Wikimedia Commons, CC BY-SA3.0)

one, which we can call real, and a perceived one, which we can call received. As with the Rubin vase picture, we are not deceived as such, but we only receive a sensation that is mediated through our perceptual apparatus, and, at the same time, we know from other sources (seeing the pencil prior to it being put into the glass of water, and retrieving the pencil when we take it out of the glass of water, operating with a belief that in all three moments – prior, actual and post – the pencil did not change its essential features) that the perceptual object has a different appearance from its actual state under certain conditions. Our viewpoint is still a mediated one.

The Penrose stairs (Figure 1.3), also known as the impossible staircase, is a two-dimensional depiction of a staircase in which the stairs make four 90-degree turns as they go up or down, forming a continuous loop. Although the staircase is conceptually impossible, it does interfere with our perception, since it looks like a person could climb forever and never get any higher. Looking closely at this set of stairs, it is hard not to feel that a perceptual trick is being played on us. And the reason for this is that the dimensions of the stairs are not depicted exactly as they would be in a photograph, although a photograph of an object is never in itself an absolute representation of an object. Small and indiscernible adjustments are made to some of the steps so that an impression is given of an impossible stairway. The picture demands a particular interpretation of it, and that interpretation rests on an understanding of certain features of the object's depiction. The hermeneutic process is at work.

With the twisted cord illusion (Figure 1.4), we have to decide whether what we see is a spiral or a series of rings. This optical illusion

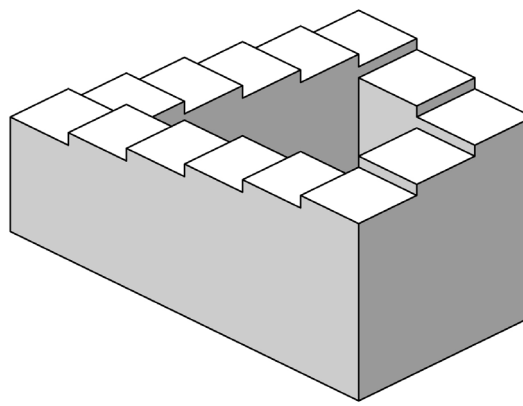

Figure 1.3 Penrose stairs (Source: Sakurambo, Public domain, Wikimedia Commons)

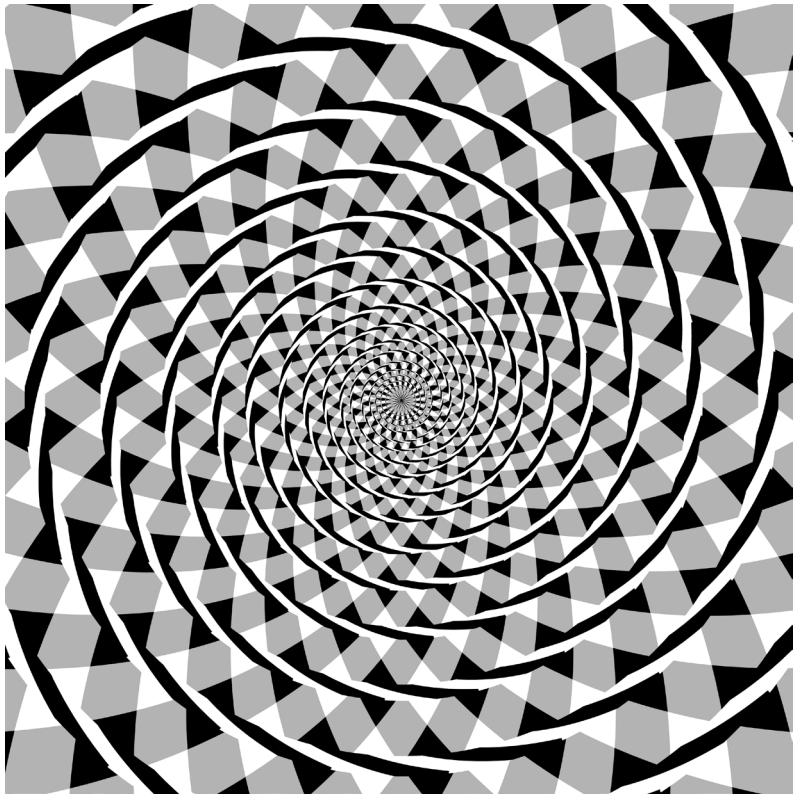

Figure 1.4 Twisted cord illusion (Source: en.wikipedia.org, Wikimedia Commons)

or perceptual conundrum was first developed by Sir James Fraser in 1908. It is described as a false spiral because the actual object – a depiction in its own right – is a set of concentric striped rings. Optical illusions always set a real-world object against a picture of that object at a later point of time after it has been perceived or received by the human mind. Discontinuities are contrary to this view of the world, and they are possible renditions of the way we connect to the world. We are hearing, feeling, seeing, smelling and tasting beings, that is, we conceive ourselves as taking part in the endless process of interacting with our environment.

Trees by Sarah Scott (Figure 1.5 in greyscale) is a painting of trees in a wood. Representation can be thought of in this instance as having a degree of abstraction because it involves the deletion, the elimination, the taking away, of one or more characteristics of the original, and

Figure 1.5 *Trees* by Sarah Scott (Source: Author)

because it involves a substitution of one characteristic by another. Even a fairly realistic painting of a tree, or even a photograph of one, lacks some features of, and substitutes other features for, the original trees in a wood that it is meant to represent. For example: a painting is two-dimensional, whereas the actual set of trees in a wood is three-dimensional; the surface of a painting is paint, but the actual trees are not; the trees are given certain qualities, and are placed in particular positions that they do not have and are not so placed in real life; and so on. The depiction of a tree or trees in a wood is usually sufficient for us to recognise that they are trees, and trees in a wood. However, when the tree is so different from an actual tree, or at least what we think about as a tree, then the painting is often spoken about as non-representational or abstract, although all paintings or representations can be said to be more or less abstracted from reality, as we conceive it from and through other sources.

The Müller-Lyer illusion (Figure 1.6) makes lines of the same length appear to be different. It consists of two lines, one framed by closed arrowheads and one framed by open arrowheads. They are of the same length, and yet because they are attached to different sets of arrowheads, they appear to be of different lengths. In this picture, it is

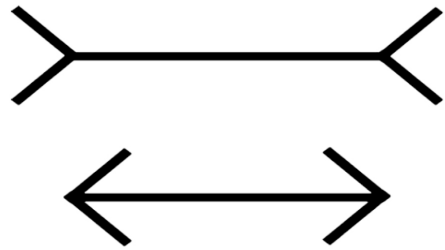

Figure 1.6 Müller-Lyer illusion (Source: Author)

fairly easy to adjust our perception of the object, so that we can see that the two lines are of the same length. We can do this by focusing on the lines and not on the arrowheads, and what we are doing here is engaging in meta-cognitive processes. Meta-cognitive and self-regulated learning refers to learners' awareness of their own knowledge, and their ability to understand, control and manipulate their own cognitive, skill-oriented, embodied and dispositional processes. They work by persuading learners to think about these auto-learning processes in more explicit ways.

These seven images (including the cover) refer to something other than the objects themselves; they are not simple representations of the object or objects. The relationship in representationalist frameworks between what we say and what is in the world is one of identity or reflecting back the original object. Furthermore, what seems to follow from this is that any proposition that we might want to make about the world is meaningful only insofar as it pictures states of affairs or matters of fact. And, again, what this means is that other types of propositions that we might want to give expression to, such as ethical, aesthetic or metaphysical ideas about the world, are literally nonsensical. This immediately creates a problem that needs a solution, or, at least, a tentative solution, before I can continue with my argument. I am searching for the meaning or meanings that we can give to the concept of learning, and this concept, I am suggesting, is not used to picture the world as it is. Representational theories are presupposed by a notion of a state of affairs in the world, and this theory of language would seem to deny meaning to the types of statements that I want to make in this book.

A semantic theory, an anti-representationalist theory of world–mind and mind–world relations, seeks to develop an argument or series of arguments against words naming objects, the reduction of language to representation and the adoption of an atomistic unitary philosophy. What this means is that for certain words and concepts, we cannot give

a definitive account of meaning, and this applies equally to words such as 'language' and 'game', and complex word forms such as 'language-game'. This does not mean that we cannot use these words and many others on the grounds that they are imprecise in definitional terms, but only that the case for establishing the meaning of a word, set of words or word-concept does not lie in the way it is defined. However, what this does is point to the conventional (not necessarily rule-bound) nature of meaning derivation. This suggests that the meaning of a word, sentence or proposition resides in, and can only be fully understood within, the contexts of its utterance (and these in turn need to be explained). This assertion is a refutation of the notion that meaning is given by the fixed and essential grammar of the word, sentence or proposition, typically addressed by reference to a dictionary or a work of reference. Another fundamental concept is supersession.

Supersession

Here is a variety of ordinary everyday material and discursive supersessional objects – a shopping list (Box 1.1), a set of questions in a census (Box 1.2), taxonomic characters (Box 1.3) and a skill development directory (Box 1.4).

We can make a number of observations about the first of these, the shopping list (Box 1.1). It is a prelude to a buying and selling interaction, although we are not clear with whom and by whom. It is in the main a collection of household items that need to be replaced every so often. The items are categorised into nine types: fruits, vegetables, spreads/dressings, condiments/spices, flavourings, dairy produce, pet food, lighting accessories and bodily cleansing agents. The categories are not labelled, but only shown by a blank space between the separate types. Other types of classification could have been used. For example, the items could have been arranged as: fresh produce, grains, meat/protein, dairy, baking goods, freezer goods, canned/dried goods, condiments/spices, oils/vinegars, and snacks. The criteria used here are: product freshness, cultivated cereals, protein providers, milk products, goods that need to be baked, goods that need to go in the freezer, goods that either come in cans or are dried, flavouring items, flavouring complementors, and goods that are eaten in between meals. There are of course other categorising systems that the person who compiled the shopping list could have used. It is possible that this shopping list with its categories (and the different types of measurements of them) was

Box 1.1 A shopping list

10 apples	1 jar peanut butter	6 litres milk
Bunch of bananas	2 jars apricot jam	3 packs butter
Pineapple	1 jar marmalade	Double cream
4 oranges	1 tube mayonnaise	6 eggs
Bunch of grapes	1 tube mustard	Cheddar cheese
1 lb berries	Tomato ketchup	3 fruit yoghurts
Large melon	1 jar pickles	
	Olive oil	Pet food
1 lettuce	Vinegar	Litter
8 large tomatoes	Soy sauce	Treats
5 red onions	Salad dressing	
Broccoli	Golden syrup	Candles
1 kg green beans		Batteries
1 lb carrots	Salt	Light bulbs
Large cucumber	Pepper	
5 cloves garlic	Wasabi	Shampoo
3 large peppers	1 ginger root	Toothpaste
3 lb potatoes	Vanilla essence	Deodorant

compiled to conform to the categorising system used in a particular supermarket where the bulk of the shopping was to take place, although I doubt it. This shopping list is also an account and selection of items that are needed by a person in order for them to live a happy and contented life as they see it.

Another example of a supersession is the census depiction of an important concept, ethnicity (see Box 1.2). This is a set of questions taken from the 2021 UK Census. The topic is ethnicity, which is an extremely difficult category to measure – a census is always a counting exercise, with its reductive and decontexualising elements. Ethnicity has been understood in a number of different ways: as primordialist (nations or ethnic identities are fixed, singular, natural and antecedent), as constructivist (nations or ethnic identities can be multiple, plurisemantic and contested, and are socially constructed through interaction with other people), or as instrumentalist (nations or ethnic identities are developed to unify a population). We can note that the principal categories used are placed in some form of order of importance: White; Mixed or multiple ethnic group; Asian or Asian British; Black, Black British, Caribbean or African; and Other ethnic group. The first is more important than the

Box 1.2 Ethnicity

What is your ethnic group?
Choose one section from A to E, then tick one box to best describe your ethnic group or background

A. White
English, Welsh, Scottish, Northern Irish or British
Irish
Gypsy or Irish Traveller
Roma
Any other White background, write in

B. Mixed or multiple ethnic group
White and Black Caribbean
White and Black African
White and Asian
Any other Mixed or Multiple background, write in

C. Asian or Asian British
Indian
Pakistani
Bangladeshi
Chinese
Any other Asian background, write in

D. Black, Black British, Caribbean or African
Caribbean
African background, write in below
Any other Black, Black British or Caribbean background, write in

E. Other ethnic group
Arab
Any other ethnic group, write in

Source: London Datastore (2021)

second, the second is more important than the third, and so on. We can also note that one of the distinguishing markers is the colour of someone's skin, redolent of the category system used in the South African apartheid system. In the White category, there are homeland divisions, nationality divisions, traveller divisions and primordialist divisions, all swept aside by the overarching issue of skin colour. In the second, Mixed or multiple-ethnic group, there are homeland divisions, skin colour divisions, geographical divisions, primordialist divisions, valorisations concerning mixed ethnicity, self-identifications and so on. In the third grouping, there are geographical divisions and false ethnic divisions, and there is also an assumption that those people who live in the UK subscribe to some form of British identity, or even that those people who live in the UK but were born elsewhere subscribe to some other ethnic identity than British. In the fourth category, we have a mixture of geographical, pigmentation, country-cluster, and non-White divisions. In this extraordinary set of categories, we have the grounds for confusion, racism, misunderstanding, and distortion.[10] We should also remind ourselves that there is a compulsory element to the Census – the law requires us to fill in a census form every 10 years.

The concept of ethnicity has been used to signify a division of people into different groups. Ethnicity as a concept and as a praxis over time developed the same or similar semantic relations to the concept and praxis of race. Anglo-American discourses on race and ethnicity are linked to discourses on eugenics, the family, sexual predation, normality and population management, which function within the networks of power that Michel Foucault (2010) referred to as biopower. Ethnicity as a concept and as a praxis therefore functions within biopower networks. An ethnicity or ethnic group is a shared characteristic of a grouping of people that can be said to differentiate them from other groups. It might

[10] 'This book first arose out of a passage in [Jorge Luis] Borges, out of the laughter that shattered, as I read the passage, all the familiar landmarks of my thought – *our* thoughts that bear the stamp of our age and our geography – breaking up all the ordered surfaces and all the planes with which we are accustomed to tame the wild profusion of existing things, and continuing long afterwards to disturb and threaten with collapse our age-old distinction between the Same and the Other. This passage quotes a "certain Chinese encyclopaedia" in which it is written that "animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) suckling pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camelhair brush, (l) *et cetera,* (m) having just broken the water pitcher, (n) that from a long way off look like flies". In the wonderment of this taxonomy, the thing we apprehend in one great leap, the thing that, by means of the fable, is demonstrated as the exotic charm of another system of thought, is the limitation of our own, the stark impossibility of thinking *that*' (Foucault, 1970: xv).

also be an imposed characteristic of a group of people by another group of people. These characteristics are: cultural heritage, racial origin, ancestry, homeland, language, dialect, religion, mythology, folklore, ritual, cuisine or physical appearance. Through processes of language shift, acculturation, diaspora or religious conversion, individuals or groups change their allegiance, their ethnic identity and their ethnogenesis.

Taxonomic characters are the markers which are used to provide the evidence for divisions and partitions in and between the different items in a biological and species-specific taxonomy. Taxonomic characters (see Box 1.3) could include morphological, physiological, molecular, behavioural, ecological and geographical markers.

Classification, then, involves a process of determining the theoretical commitments of the object-species, what its basic units might be and the reasons for ordering these units (for example, morphological, physiological, molecular, behavioural, ecological and geographic

Box 1.3 Taxonomic characters

Morphological characters
General external morphology
Special structures (for example, genitalia)
Internal morphology (anatomy)
Embryology
Karyology and other cytological factors

Physiological characters
Metabolic factors
Body secretions
Genic sterility factors

Molecular characters
Immunological distance
Electrophoretic differences
Amino acid sequences of proteins
DNA hybridisation
DNA and RNA sequences
Restriction endonuclease analyses
Other molecular differences

Behavioural characters
Courtship
Other ethological isolating mechanisms
Other behaviour patterns

Ecological characters
Habits and habitats
Food
Seasonal variations
Parasites and hosts

Geographic characters
General biogeographic distribution patterns
Sympatric–allopatric relationship of populations

Source: Mayr (1991: 159)

criteria). There are roughly two types of biological classification: those that reflect principles that are relevant to the object itself and those that relate to the historical development of our understandings of the object-species; or both of these can be combined. The ordering principle is given phylogenetically, which successively through time leads to a phylogenetic tree, resulting in a hierarchical classification consisting of species, genera, families and the like. The implication of this is that classification is always open to new evidence and new orderings, and should never be reified. Current classifications are simply convenient marker posts for us, as we try to make sense of the mass of items that make up the natural world. We have already seen how race and ethnicity as concepts and as practices can be understood, not as having universal characteristics, but as attempts by biologists and other taxonomists to impose on the world a particular and specific determination of how they work.

Categories or categorisations have a history and can be genealogised. Aristotle (1963), writing in the fourth century BCE in Athens, identified ten highest categories of things: substance (for example, a woman or a horse), quantity (for example, a kilometre in length), quality (for example, red or soft), relation (for example, fraction or proportion), place (for example, geography or space), date (for example, in the past or future), posture (for example, lying down or sitting), state (for example, awake or dreaming), action (for example, swimming or walking) or passion (for example, experiencing pain or pleasure). Immanuel Kant developed a notion of cognitions of phenomena, thus locating these categories firmly in the mind, as minded objects.[11] In his *Critique of Pure Reason*, Kant (2007) constructed his categories from an understanding of judgements that we make. He started from a framework of Aristotelian logic[12] and endorsed Aristotle's four basic or foundational categories: quantity, quality, relation and modality, with each of these basic categories being expressed, or finding its meaning, in a number of subcategories. In relation to quantity, for example, a judgement might be universal, particular or singular, and with regards to relations, it might be categorical, hypothetical or disjunctive. Using this methodology, Kant then deduced (logically inferred) his twelve pure concepts of understanding, divided into four classes of three: unity (quantity), plurality (quantity), totality (quantity), reality (quality), negation (quality), limitation (quality), inherence and subsistence (relation), causality and

[11] Throughout this book, I will be using the term 'minded' to express activities of the mind. The usual term for this is 'mental'; however, this has too many pejorative qualities attached to it.
[12] This refers to the traditional system of logic expounded by Aristotle (2018a) and developed in the Middle Ages, concerned principally with deductive reasoning as expressed in syllogisms.

dependence (relation), reciprocity (relation), possibility (modality), existence (modality) and necessity (modality). These are conceptual structures and not just divisions in things in themselves.

Categories can have a supersessional form. There are three types: simple supersessions, sequencing supersessions and hierarchical supersessions. In the first case, a category gives way to another category, where this is demonstrably superior to the original category in some or every way – it has superior qualities. These states of affairs may be material (although most categories are exclusively discursive) and can refer to different types of categories in the world (discursive, material, relational, configurational and person-oriented). With sequencing supersessions, a category is part of a sequence of other categories, so that each part of this sequence is superior to the one directly below it in the sequence because it has superior qualities. There is no requirement for it to be of a particular length as a sequence. With hierarchical supersessions, a category is part of a sequence of events that culminates in an end-state that is complete, insofar as it cannot lead to a higher state of being. This form therefore suggests that all the other events are inferior or incomplete for a variety of reasons. The key, then, to understanding categories and concepts lies with the types of relations that exist between objects, object-relations, object-configurations and persons in their formation and reformation, and as they play out or have played out in antecedent, contemporaneous and applied semantic settings. As another example of a set of categories, here is a skill development list (see Box 1.4) with regards to phonological learning, ordered in the first place by the expected age of the child.

The age at which a child is expected to be able to perform these various skills is based on a level of difficulty, assumed but not absolute, and a whole raft of political and social commitments to government priorities and objectives, and others, such as the need to classify, to divide up and to identify, a suitable primary school curriculum. In other words, phonological classifications and the criteria used to construct them could have been different. So, for example, *rhyme recognition odd word out*, could take place at a different point in the sequence, the order of activities and skill developments could have been different, and the relationship between the child's age and the expectation that this is what the child should be able to do is an assumed relationship and not a natural one.

This is a policy text, above all else. Policy texts condition the types of readings that can be made of them. They are constructed in different ways and therefore can be understood in terms of several continua: as being prescriptive or non-prescriptive, as having a wide or narrow focus,

Box 1.4 Phonological learning: ages at which 80–90 per cent of typical students have achieved a phonological skill

Age	Skill domain	Sample tasks
4	Rote imitation and enjoyment of rhyme and alliteration	pool, drool, tool 'Seven silly snakes sang songs seriously'
5	Rhyme recognition, odd word out	Which two words rhyme: stair, steel, chair?
5	Recognition of phonemic changes in words	Hickory, Dickory, Clock. That's not right!
5	Clapping, counting syllables	Truck (1 syllable) Airplane (2 syllables) Boat (1 syllable) Automobile (4 syllables)
5	Distinguishing and remembering separate phonemes in a series	Show sequences of single phonemes with coloured blocks: /s/ /s/ /f/; /z/ / sh/ /z/
5½	Blending onset and rime	What word? th-umb qu-een h-ope
5½	Producing a rhyme	Tell me a word that rhymes with car. (star)
5½	Matching initial sounds; isolating an initial sound	Say the first sound in: ride (/r/) sock (/s/) love (/l/)
6	Compound word deletion	Say cowboy. Say it again, but don't say cow.
6	Syllable deletion	Say parsnip. Say it again, but don't say par.
6	Blending of two or three phonemes	/z/ /ū/ (zoo) /sh/ /ŏ/ /p/ (shop) /h/ /ou/ /s/ (house)
6	Phoneme segmentation of words that have simple syllables with two or three phonemes (no blends)	Say the word as you move a chip for each sound: sh-e
6½	Phoneme segmentation of words that have up to three or four phonemes (include blends)	Say the word slowly while you tap the sounds: b-a-ck ch-ee-se c-l-ou-d

Age	Skill domain	Sample tasks
6½	Phoneme substitution to build new words that have simple syllables (no blends)	Change the /j/ in cage to /n/ Change /ā/ in cane to /ō/
7	Sound deletion (initial and final positions)	Say meat. Say it again without the /m/ Say safe. Say it again, without the /f/
8	Sound deletion (initial position, include blends)	Say prank. Say it again without the /p/
9	Sound deletion (medial and final blend positions)	Say snail. Say it again without the /n/ Say fork. Say it again without the /k/
Source: Moats and Tolman (2009)		

as being open or concealed, as authoritarian or non-authoritarian, as general or particular, as denotative or performative, as single-authored or multi-authored, as monomodal or multimodal, as referenced to antecedent, contemporaneous or applied networks of meaning, and as coherent or fragmented. Since the form that the policy text has conditions the type of reading that can be made of it, it is possible to point to a notion of reading impediments. These constraints or impediments can be understood as referring to the contents of the policy text (the claim made about what has happened and what this implies for what will happen), about relations within the policy text (the way social relations are inscribed in it and the way the reader is encouraged to understand these as normal), and the positioning of the various players in the policy game and how much power they have.

Policy texts work as mechanisms of hierarchical normalisation and thus have the potential to become the hegemonic way of arranging objects in society. These texts, although understood by many people as neutral and non-ideological, operate in effect as discourses of normality, so that for readers to understand themselves in any other way is to understand themselves as abnormal and even as unnatural. The reader and the user are not just presented with an argument and then asked to make up their minds about its merits or demerits, they are being positioned within a discourse, which, if it is successful, restricts and constrains the reader from understanding the world in any other way. The discursive configuration is characterised as common sense, whereas in fact it is merely one way of viewing the world and is therefore ideological (see Chapter 3). We can also reference a text such as this.

Referring

Here is a paragraph from the short set of essays developed by Wilfred Sellars into a book, which he called *Empiricism and the Philosophy of Mind* (Sellars, 1997). This text originally began its life as the 1984 Reith Lectures, and the edition that I have includes an introduction by Richard Rorty and a study guide at the end of the book by Robert Brandom. A paragraph taken from the book (see Box 1.5) is replete with references of one type or another:

Box 1.5 Givenness

Many things have been said to be 'given': sense contents, material objects, universals, propositions, real connections, first principles, even givenness itself. And there is, indeed, a certain way of construing the situations which philosophers analyse in these terms which can be said to be the framework of givenness. This framework has been a common feature of most of the major systems of philosophy, including, to use a Kantian turn of phrase, both 'dogmatic rationalism' and 'skeptical rationalism'. It has, indeed, been so pervasive that few, if any, philosophers have been altogether free of it; certainly not Kant, and, I would argue, not even Hegel, that great foe of 'immediacy'. Often what is attacked under its name are only specific varieties of 'given'. Intuited first principles and synthetic necessary connections were the first to come under attack. And many who today attack 'the whole idea of givenness' – and they are an increasing number – are really only attacking sense data. For they transfer to other items, say physical objects or relations of appearing, the characteristic features of the 'given'. If, however, I begin my argument with an attack on sense datum theories, it is only as a first step in a general critique of the entire framework of givenness.

Source: Sellars (1997: 1)

The paragraph starts off with the observation that many people in the past have described the given as this, this or that, in the process referring to what other people have said about givenness, without identifying who these people are. In the second sentence, Sellars refers to a generic collection of philosophers, who have done just this, that is, worked within a framework of givenness. In the third sentence, a

reference is made to most systems of philosophy, without specifying what these systems are, as purveyors of givenness. Sellars even, and deliberately, does not exclude from this general categorisation two of his major influences, Immanuel Kant and Georg Hegel, having previously referred to Kant's notions of dogmatic and sceptical rationalism – referring, then, not just to a set of ideas but also to their expression. In the next sentence, Sellars refers to an attack on specific varieties of givenness, citing intuited first principles and synthetic necessary connections – the reference here is to unspecified critiques made by some philosophers who are not named, although they could be easily identified if we really wanted to. In addition, we are told that there are many of them; many references could be made to them. Finally, a reference is made to sense-datum theorists in the last sentence of this paragraph. These are obvious reference points in the paragraph; there are many others in the book, including all those ideas that are referred to here but have already been thought of by other people stretching back in time. What I have also been doing here is referencing the work of Wilfred Sellars.

Reference or referring to something is a key life-concept and it is used in a number of ways. Within a text, a referring points to a material, discursive or person-oriented object that is relevant to what is being discussed. Other work is being referred to here, connecting what is present in the text to something which is not present but exists in a different time-space moment. This form of referencing does not have to have a textual positioning, but can apply to many activities in the life-world. For example, I can say that the highest point in the British Isles is the peak of Ben Nevis and that I wish to climb to it. The expression of a wish has a reference point, which is not present in its material form at the utterance. Referencing may occur wholly at the discursive level, so what we are doing is combining or making a connection between two discursive objects, the one present and immediate, the other in a different spatial or temporal moment.

Referencing has many forms. The Harvard referencing system distinguishes between in-text citations and full references, expressing this in a technical sense, with this division being bureaucratic rather than naturally semantic. In-text citations are inserted in the body of the text and give the author(s) and publication of a source that is being referred to. A full reference, given in alphabetical order at the end of the work, gives full bibliographical information for all sources that have been referred to in the body of the text. A referencing device, *cf./see*, is used in writing in a deeper sense to distinguish between a comparison in a general sense and a pointer to a source of information. Again, these two

terms inserted into the text can mean that the one, *cf.*, is used to signify a critical referencing of the referent, whereas *see* refers to an additional reference, which is generally in support of the argument being made at that point in the text.

A reference, then, as we have suggested is a relationship between objects, where the first object is prioritised, that is, it is given a more important meaning than the second object. It is, consequently, a valorisation, in that it gives a value to or enhances an already existing value of an object, and at the same time modifies the valorisation system within which the utterance is embedded. References can denote different types of relationships between different objects, so we can talk about forcing references or evaluative references. All references to the world involve the identification (the action or process of identifying someone or something, and positioning that action or process in the public domain), manipulation (the action or process of proactively changing the form or meaning of the object in the world), transformation (the successful achievement of this action in the world) and reconstruction of the categories (the successful achievement of positioning these actions in two of our three semantic networks – contemporary and pragmatic), and we cannot avoid this.

Referencing can take place between many different types of objects – thought(s), sensations, visualisations, olfactions, emotional states, people, space-time coordinates, symbols or physical objects. The word reference is thought to derive from the Middle English word, *referren*, from Middle French, as in *référer*, or from Latin, *referre*, meaning 'to carry back'. The verb, refer (to) and those words from which it is derived, may carry the sense of 'to connect to' or 'link to' (*Online Etymology Dictionary*, 2001–23: entry on 'reference'). Reference is not the same as meaning. If we point to something in the world, we are referring to another object. Every time we use a reference, implicit or otherwise, we are making a connection between different parts or nodes of a system, which means that the two actions go together. You cannot have a system – linguistic, conceptual, material, discursive and so on – without, in operating it, making connections to its other parts.

There are also hidden references, in any text we choose to read, to a multitude of other people saying the same thing in the past, or something which is extremely like it, which the author is either unaware of or has chosen not to refer to in this account. This argument about referencing can be extended to include every utterance that we make in the world – someone somewhere has said the same things as we are saying now in other time-space instances. Our language is a mass of nodes, nodal

points, connections and relations, and fundamentally references, which we can then reference. These constellations of meaningful contents in turn can be thought of as having three forms: antecedent conceptual contents, coetaneously arranged conceptual contents and those formed linguistically and used in the world. In addition, every act of referencing is a powerful addition to the world's resources – it can change the way we see the world, albeit in small and at times insignificant ways.

The book

The first part of the book, then, is concerned with the philosophical frame that I propose to use and the way this relates to my central concern, the concept and practice of learning, and, in particular, its ontology (see this chapter), its semantic dimensions (see Chapter 2), its epistemology (see Chapter 3), its curricular elements (see Chapter 4), its credibility (see Chapter 5) and its ordering process (see Chapter 6). The framing function, an account of the background to the methodology being used in the construction of knowledge in this book and elsewhere, comprises a reasoned argument to support a claim about some aspect of the world, whether meta-epistemic or empirical. Any claim to knowledge made by a person is enframed, and, consequently, there is a need to articulate and give expression to this enframing as it relates to ontological, epistemological and methodological concerns. This requires a theory of mind, and therefore a theory of the relationship between mind or minds and the world. In addition, concepts, such as learning, can be polysemic and used in a number of different ways and are enframed in a form of life. It is possible to argue credibly that there are four ways (epistemic, coherentist, rational and logical) of establishing the truth or otherwise of any propositional claims we might want to make (see Chapter 5). All this and more needs to be established before the central argument of this or any other book can be attended to. This is what this first chapter has been about.

Any assertions that I make in the pages of this book will point in the first instance to the possibilities and, as importantly, limitations, of a word, word-set or linguistically structured concept with the purpose of determining meaning. The aim, first and foremost, is a semantic one. If the task is semantic, then we are necessarily concerned with determining the truth or otherwise of the statements we make about the world, including the one that begins this sentence. However, what we can take from this discussion of the semantic implications of using a concept such

as learning in our utterances and actions in the world is that any reading or interpretation is epistemically enframed in some way or another.

Here are some specific frames or framings that might enable us to do this: the frame of molecules and atoms, for example, neurophysiological explanations, the frame of associations between variables, the function or use-in-the-world frame, the frame of events and event(ing)s, the linguistic frame, the hermeneutic frame, the structural frame, the semantic frame, and the universal or transcendental frame. This list places these frames in an order. However, this is not a straightforward hierarchical set of objects where the atomic frame is the lowest point (has the least purchase on the problem that we are seeking a solution to) and the transcendental frame is the highest point (has the most purchase on the problem as it is defined), with other levels equally distanced between the meanings given to the first and last frames. Here, different criteria are being applied to these different frames, and this complicates the description of the relations between them.

These frames, then, are manifestations of the determining differences between the different levels or frames. If we focus on and commit ourselves to the subatomic level, where the medium is the atomic particle, we are necessarily adopting a physicalist view of consciousness, a belief that consciousness and individual thought is an illusion, or at least that this illusion is composed of these atomic particles, a reductionist methodology that is bereft of meaning, and a causal relationship to other levels of explanation or other frames. Learning as a concept and as a practice is treated reductively and in a limited way, so neurophysicalists and neurobiologists can then claim that the brains of some people are more efficient than those of other people, that there is a neurological basis for this claim, in that specific genes have been shown to generate cellular properties associated with learning, and that these cellular properties were found to be more in abundance in people who had been deemed to be more intelligent.

At the level of association, we are committing ourselves to a reductionist methodology or reductionist way of seeing the world. The detheorisation of much contemporary research into learning, for example, involves a separating out of the concept from the framework in order for it to have the properties of a variable. Having detheorised the concept, relations are then identified between these different variables, even if the variable itself does not have a meaningful relationship with the world. We can see this most obviously in studies which we call associational.

The function or use-in-the-world frame suggests that there is a set of social structures that exist independently from individuals. This social

structure consists of material and discursive objects, object-relations and configurations passed on in various ways through institutions that shape the individual. This has been conceived of as being similar to the way a human body works, as social institutions are said to work in the same way as human organs. These are interconnected and interdependent parts which function for the good of the whole.

Within the frame of events and event(ing)s, social processes unfold over time, operate from moment to moment in the present and have no duration. In addition, all social processes, such as socialisation, learning, education, birth and death, are understood as discrete occurrences, even if they are connected to each other by other discrete occurrences. Events are actual time-space happenings that can be understood directly and in a non-mediative way. This is the frame of conventional history.

The language frame is more difficult to comprehend. The issue is that our attempts at describing the world are always and inevitably circumscribed by the condition (and contents) of our language, and what this means is that this language set (the one we use) – its structures, its structured meanings (the semantic dimension), its ways of asserting what is true knowledge and what is false knowledge, its designation of the types of relationships between mind and world that can exist, in short, its determination of what reality is like – is the prime determinant of our way of life. This argument – that we cannot operate in any sense outside of a language or a set of languages – is contingent on the idea that there are no universals, such as thought universals, behavioural universals, existential universals, metaphysical universals; or, to put it in a different way, we cannot think, operate, exist or speculate outside (without using) a language. And further to this, since language is our world, we cannot know if there is another world outside of the language or languages we are using.

If we work within the frame of interpretation, then we understand human action as inseparable from meaning-making, with our experiences organised through preformulated interpretive framings. Interpretivists believe that we belong to traditions of thought, and the task of the theorist is to make sense of these interpretations, even though such interpretive activity is mediated through the theorist's own frame of reference. The field of study is therefore the meaningful actions of social actors and social institutions. Contemporary debates about transmission of and dialogue around knowledge content, such as the forms that learning takes, inadequately account for the hermeneutical insight that all learning is dialogical, and that the background against which learning takes place is always already in play and cannot be transmitted to a learner.

Structuralism is the school of thought that human behaviour must be understood in the context of the social system – or structure – in which people exist. People are not just independent actors making independent decisions; they are the product of the social conditions in which they live. Marxists, for example, think that institutions, culture and ideas (understood as the superstructure) cannot be understood separately from the basic social class interests of a capitalist society.[13] This set of ideas is therefore deterministic.

Semantics is a linguistic theory, where meaning relates fundamentally to a linguistic object or set of objects, and not to what those linguistic tropes refer to, those objects, object-relations, object-configurations or people that have an ontological existence outside of the language in which they are being expressed. A semantic theory is one in which the specifications of meanings are determined in a symbolic system. There are two general approaches: referential approaches and use-theoretic approaches.[14] The first of these understands the semantic properties of linguistic expressions in a conceptual form as broadly referential in that their primary relation is to extra-linguistic objects and other language sets. We talk and think in relation to the referential properties of these other objects. The use-theoretic approach focuses on the regularities or rules of use. Under this conception, it is these rules and regularities which account for meaning and conceptual content. However, these have weak referential relations to the outside world.

Here are a number of statements that can be thought of as universal or transcendental: a distinction can be drawn between the way the world works and how these workings can be expressed; social reality has ontological depth; the social dimension of reality can be understood as an open system; our conceptual frameworks, perspectives on the world, and descriptive languages interpenetrate what we are calling reality to such an extent that it is impossible to conceive of a pre-schematised world; and there are such entities as universals of coherent thought, and even some universals relating to ontological relationships such as a mind–world distinction, and consequently a connection between them. These are all meta-knowledge statements; that is, they refer to a material world, can be construed as discursive objects in the world, and are expressed as true statements about this and other worlds. They do not seem to be relative to particular manifestations of human existence but are universal in intent and scope. They are deemed to be rational, or at

[13] This deterministic version of Marxism is, of course, much disputed: see Marx (2009).
[14] See Steinberger and Murzi (2017).

least they are seen as parts of a system of thought, where the criteria for determining whether something is rational or not includes some notion of what could constitute intelligibility.[15]

There are clear differences between the first and last framings. There are also different time-relations at the different levels; for example, the level of events refers to distinctive points in time, whereas the structural level refers to whole systemic occurrences that last over time. These nine levels or frames, then, are: atomic, associational, functional, actual or event(ing), linguistic, hermeneutic, structural, semantic and universal. They enframe the concepts and praxes that are associated with learning, and in turn are enframed themselves.

We need, then, to address the relationship between knowledge and the world. Representationalist theories of mind identify an inner realm of representations and an outer realm of objects in the world, which are placed in some form of identity relation. If we reject this approach, the focus of our work in the world should be not so much the existence of these two realms and the possibility of their identification, but the relationship between the two. The question then becomes: How do we understand the relationships between mind and world, and world and mind? A possible answer to this question is that we should prioritise expression or inference before representation in the semantic process, that is, in the determination of meaning. An activity of the mind is not a representation of an action in the world. Ethical and epistemic judgements bring about something – they do not act exclusively as reflectors of a preformulated reality.

I also make the case (provide sufficient reasons for making a claim of knowledge) for values, valorisations and norms (personal, epistemic, social, political, dispositional, spatial, temporal and ethical) as being centrally implicated in both our descriptions of the world and in our life-choices. There are two dimensions to this claim. The first is a claim that objects in the world and human beings are valued in relation to each other and to other object-types. A second dimension is that values are epistemological. If we accept that value-free knowledge is an impossibility, that we inevitably make prejudgements about the world in our investigations, then being in the world is understood as a practice, primed for investigation, but resistant to algorithmic and value-free methods for describing it. Learning as a concept and as a practice has

[15] These statements or propositions are hinged, in Wittgenstein's (1969) terms, in that they can be thought of as being essential, if we are using a language, to our language games, thinking processes and conceptual schemes.

ethical, political, social, discriminatory, prejudicial and human consequences and implications.

The second part of the book incorporates a distinction between meta-epistemic and meso-epistemic framings, and a praxical manifestation and justification for the relationship between them. (Chapter 7 is a bureaucratic theory of learning; Chapter 8 is a genealogy of curriculum and learning; Chapter 9 is a political theory of curriculum, knowledge and learning; and Chapter 10 is an ethical theory of learning.) A praxis of learning is not just an action, for this would render the concept of learning as meaningless insofar as everything we do in the world would be a praxis. It involves some form of conversion of thought into action, or at least the construction of a particular thought or set of thoughts in such a way that certain actions inevitably flow from it and other actions are set aside. As with all thoughts or thinking, this praxis is embedded in histories, archaeologies and genealogies of that thought or concept, and what that thought or set of thoughts allows or disallows. And, of course, praxes become, or may become, settled and persistent configurations, discursive or material. This last point can be best illustrated by a close reading of some examples of praxes to do with learning.

The introduction

A book deserves an introduction. However, there are at least four sets of meanings that can be given to the idea of an introduction. The first is where the reader is presented with a synopsis of the general argument being made in the book without a full account of its elaborations and justifications. A second type of introduction is where the framing or indeed enframing of the general argument is articulated. The third credible use-function that can be given to the idea of an introduction is that it is reflexive, and this involves a prior reflexive and thus critical account of the argument being made in the text. It can also be an account of the book's textuality. I have referred to this use-function in the preface. A fourth type of introduction is an account of what the reader can expect if they continue with their reading of the book, and this involves a series of signpostings to its various parts and arguments. This chapter, which serves as the introduction to the book, has elements of all four of these. The framing function, a setting out of the background to the methodology being used in the construction of knowledge in the book, comprises an account of, or reasoned argument to support, a claim about some aspect of the world, whether meta-epistemic or empirical. This first

chapter has been an attempt at providing a set of convincing reasons for the framing assumptions that I make.

In Chapter 2, I suggest that concepts, and this after all is the focal point of my investigation, cannot be fully determined as to their meaning in definitional and essentialising ways, but only in terms of how they are used in a way of life. I then suggest that a distinction can be made between knowledge of the world and meta-knowledge, which directly refers to knowledge of this world and not to the world itself. And further to this, all knowledge, including knowledge of learning, uses or is enframed in criteria, whether these criteria are implicit or explicit. I suggest that in addition to the use of criteria, any investigation into the meaning of a concept has a judgemental element: does this object that is being primed for investigation conform to the criteria that are appropriate to the making of a judgement of this type? An answer to this question then needs to incorporate some understanding about reasons (for making these sorts of judgements) and about whether reasons can qualify as evidence for a knowledge claim.

In Chapter 3, I focus on the important relationship between learning and knowledge. Why is this important? My contention is that learning as a concept and as a practice can be understood in epistemic terms and as part of an apperceptive process. In trying to understand how a concept functions in the world, it is important to contextualise the way it functions within our three networks or constellations of meaning: antecedent frameworks, coextensive frameworks and pragmatic frameworks. In stating this, I am invoking a truth property; indeed, I cannot say anything at all, from the most profound to the relatively trivial, without doing this. In trying to discover what the relation between knowledge and learning might or could be, I am committing myself to a truthful account of these two concepts and the object-relations that connect the one to the other. Truth as a concept and as a practice is undeniably a part of the complex webs and practices that we surround ourselves with. We cannot do without the idea, and yet, as we have observed, concepts are multisemic, semantically contested, networked, interactive, powerful and dynamic.

In Chapter 4, I provide an example of one of these onto-epistemological learning frames through the idea of a curriculum (a *Bildungstheorie*). A curriculum, which is a set of teaching and learning prescriptions, is in essence a knowledge-forming activity. However, this cannot resolve the issue of what should be included in that curriculum and what should be excluded from it. What, then, might constitute a legitimate form of knowledge, and thus by implication an illegitimate form? Three epistemic frameworks – foundationalism, instrumentalism

and pragmatism – have been suggested as curriculum rationales. In addition, a variety of social epistemologies have been identified – social constructivism, social realism, epistemic realism, inferentialism and critical realism – and although parts of these theories are understood as useful for the task in hand, I am suggesting that on their own they do not amount to a complete theory of knowledge and therefore of learning. However, elements of each of the epistemic frameworks set out above (foundationalism, instrumentalism and pragmatism) can contribute to a coherent and comprehensive theory of curriculum and provide a reason or set of reasons as to why a curriculum should include some items and not others, and what shape and form it should take.

In Chapter 5, I make the case (provide sufficient reasons for making a claim of knowledge) for values being centrally implicated in both our descriptions of the world and in our life-choices. There are two dimensions to this claim. The first is ontological, and this amounts to a claim that objects in the world and human beings are valued in relation to each other and to other object-types. A second dimension is that values are epistemological. If we accept that value-free knowledge is an impossibility, that we inevitably make prejudgements about the world in our investigations, then being in the world is understood as a practice, primed for investigation, but resistant to algorithmic and value-free methods for describing it used in the natural sciences.

In Chapter 6, I examine the issue of divisions and boundaries between objects. I make the argument that processes of classifying and reclassifying change the nature of objects, object-relations and object-configurations. All references to the world involve the identification, manipulation, transformation and reconstruction of the categories, and we cannot avoid this. The scientific method, with its claims for the possibility of positional objectivity, that concepts can be reduced to measurable constructs, and that we should adopt a representational ontology, is negligent of these. In rejecting this picture of the world, I focus in this chapter on five key concepts – averaging, probability, prediction, correlation and comparison – which are used by scientific realists and statistical positivists, who generally subscribe to a Humean[16] theory of causality as spatio-temporal contiguity, succession and constant conjunction.

In the second part of this book, my purpose is to examine four types of relations that learning as a concept and as a practice has

[16] See David Hume (2000).

taken. These are: a bureaucratic theory of learning (see Chapter 7), a genealogy of curriculum and learning (see Chapter 8), a social categorisation of learning (see Chapter 9) and an ethical theory of learning and knowledge (see Chapter 10). There are six elements or components of these relations (bureaucracy to learning and learning to bureaucracy; curriculum to learning and learning to curriculum; categorisation to learning and learning to categorisation; and ethics to learning and learning to ethical behaviour): behaviour, interaction, role, valorisation, context and belief.

In explicating a bureaucratic theory of learning (Chapter 7), I am trying to make sense of two matters: the make up or constitution of an important discursive configuration that takes as its central concern the concept and practice of bureaucracy *and* its modality and medium. The modality refers to the type of information and/or the representational format in which the information is stored. The medium is the means whereby this information is delivered to a person or group of people. The second discursive configuration (Chapter 8) is a genealogy of curriculum and learning. In this chapter, I focus on four important concepts: curriculum, validity, intelligence and learning, with the first and last of these prioritised – a full genealogy of learning would also include other material and discursive objects, other material and discursive configurational objects, and people and their workings. The third discursive configuration, in Chapter 9, comprises an attempt to understand the social, economic and political framings of learning, and, in particular, the categories that form and reform a learning discourse. The fourth learning configuration, in Chapter 10, examines the relationship between learning and ethics, and although this chapter can never be a complete account,[17] it does point to some important aspects of this key relationship.

In Chapter 11, I examine the idea of critical learning. In it, I suggest that the meta-concept of learning has to be an integral part of any social theory that we might want to develop, and that if we are to understand what the concept and practice of learning is, then we have to look at a vast array of concepts and conceptual practices that are relevant to it. Acts of deconstructing and reconstructing concepts and conceptual frames, such as justification or justifying, meaning or semiosis, indigeneity or indigenising, curriculum or curricularising, pedagogy or pedagogising, autonomy or being autonomous, inclusion or including, and education or educating, are therefore central to the work of this book. All of them

[17] For reasons of space.

have a direct relationship with learning and can be positioned in learning fields. However, these positionings need to be made explicit or, at least, good reasons need to be provided for their inclusion in these fields. What follows immediately, then, is an explanation of the role of philosophy in my attempt at understanding what the concept and practice of learning is, and this serves as an introduction to Part One.

Part One
Philosophical frameworks

Part One of this work gives expression to a set of philosophical issues that underpin every utterance that I make, and every truth-carrying proposition that is made in this book. Philosophical issues tend not to occupy a prominent place in books on learning or in accounts of research and knowledge development. Being concealed in the knowledge and learning process, they seem to be speculative and abstruse and, to a large extent, apparently unnecessary in relation to the immediate practical task of understanding the world and what it is. There seems, therefore, to be no pressing need to integrate them into the knowledge process itself. Another reason why philosophical and, in particular, epistemological issues are concealed is related to the power of positivism and its associated representational realist metaphysic. Even when researchers are not conscious of working within the general parameters of positivism, the latter still exerts a powerful influence; an influence which considers reflexive questions to be both undesirable and unnecessary. However, we can say that, whatever its source, this act of concealment means that the place and significance of philosophical issues only becomes apparent after the research has been conducted and after the learning activity has taken place.

In this book, I will try to reverse the marginalisation of philosophical issues and bring them more to the forefront of the knowledge-development process, and by this means recognise how central they are to our lives. In particular, the philosophical issue which needs most attention, but is rarely given it, is the relationship between knowledge and the world, and this has to be understood as quintessentially a learning matter. Philosophical issues are integral to knowing and learning, and cannot be ignored. The contemporary situation is such that all of us now need to think loudly and publicly, not just about learning methods, outcomes, consequences and applications, but also about the knowledge-development process itself, and to think in this way not after the event but during it. What is it, then, that we need to think about when we come to do this? One possible response is to assume that the knowledge-development activity itself is simply a matter of following the right procedures, rules or methods. This assumption, however, needs to be questioned because it misleadingly portrays research and knowledge development as mechanistic and algorithmic, and not as a learning activity. If we uncritically accept this portrayal, we forget that learning is a social practice, and that it is therefore contextualised, conceptual and embodied. One thing we can do in terms of becoming more aware of what we are doing is to recognise that it is not a technology or set of fixed behaviours but a practice, and that it is not individualistic but social.

Knowledge is transformed at the pedagogic site in every learning event in the world. What this means is that elements or constituents of learning events – the simulation of the learning object, the representational mode of the object, the degree and type of amplification, control in the pedagogic relationship, the type of pedagogic text and the way it works, relations with other people in the learning process, temporal relations, feedback mechanisms, and its relations with other learning objects – are fundamental to this pedagogic transformation. In the learning process, the learning object takes a new form because of changes to its properties.

There are a number of learning models or frameworks: mimesis, dialogism, mutuality, falsification, semiosis, reflection, meta-cognition and repetition. Each of these in turn is underpinned by a particular theory of learning, and thus any model of learning that is employed is constructed in relation to how we can know the world and what it is. In this first part of the book, I discuss semantic theories or frameworks of learning (see Chapter 2), curriculum theories or frameworks (see Chapter 3), theories of knowledge and learning and the relationship between them (see Chapter 4), frameworks of justification (see Chapter 5) and some key concepts and practices in a semantic theory or framework (see Chapter 6).

2
A semantic theory of learning

Most theories of learning[18] such as cognitivism, behaviourism, constructivism, humanism and materialism, ignore or downplay the semantic dimension of learning. What they also do is frame and reframe world-to-mind and mind-to-world relationships, a central concern in the argument in this book, in devalorised and unmediated terms (see Chapter 3). There are some exceptions to this, for example, Karl Maton's (2014) legitimation code theory. In this chapter, I will attempt the difficult but not impossible task of reincorporating a semantic dimension into social theory, and reformulating theories of learning as above all else semantic knowledge constructions. In order to understand both the concept and the practice of learning, we always and necessarily have to enframe the concept of learning. This notion of always and necessarily has the Wittgensteinian (1969) sense of a grammatical notion of inevitability that comes from it being part of a network of other concepts and of a system of convention-governed behaviour. This enframing comprises a semantic understanding of the possibilities of the concept, and these possibilities have political, social, epistemological, functional, ethical and relational meanings.

In framing the concept of learning, then, its semantic dimension is of most concern. The meaning of a concept, object, proposition or

[18] An example of this is *The Philosophy of Human Learning* by Christopher Winch (1997). Using insights derived from the work of Wittgenstein (or so the claim is made), it criticises influential contemporary accounts of learning, both in the Rousseauian tradition and in the scientific cognitivist tradition. These two schools, Winch argues, are more closely related than is commonly realised. All to the good, yes, but there is no understanding of world-to-mind and mind-to-world relationships here, nor is there any hint of the importance of values, valorisations or apperceptions in its social theory.

meta-theory lies in the mediations and negotiations we undertake in the world. This formulation does not deny the existence of a referent, as some semantic theorists are inclined to do.[19] What it does do in a Kantian sense is distinguish between an unknowable world and the way we can perceive or come to know that world. This positions the truth-value of a linguistic utterance or proposition about a concept, object, object-configuration, object-relation or person in mind-and-world and world-and-mind relationships. A theory of propositions in which the utterance represents in an unmediated way something which is external to it is unsatisfactory. Expressions and indeed propositions also have a content, and it is this that allows them to be thought of as having a meaning. The issue still remains as to what type of content-meaning we can give to linguistic expressions; since all we have established here is the possibility of these linguistic expressions having a meaning.

There is a view of semantics that is directly opposed to representationalist world–mind and mind–world relations, and this is a notion of inferentialist semantics (which we can find in the work of Robert Brandom).[20] The inferentialist starts off with distinguishing between good and bad inferences, and seeks to explain these in terms of a contextual framework, which includes notions of truth and objectivity (this is a second-order operation). Conceptual meanings, then, are embedded in the three semantic networks that were introduced in Chapter 1: the antecedents of the concept, the contemporary meanings that this concept has, and how that concept is used in the world; and this allows judgements to be made about good or bad inferences, which in turn gives priority to concepts as the basics of thinking about the world.

In an object-ontology, objects, including human beings,[21] have learnt or acquired dispositions or properties. These are conceptual relations in human beings, which cannot be fully determined as to their meaning in definitional and essentialising ways, but only in terms of how they are used. In making a truthful statement, we are not providing a description of an experience but making a claim about it, in what Wilfred Sellars (1997) described as 'a space of reasons'. He suggested that 'in characterizing an episode or a state as that of knowing, we are not giving an empirical description of that episode or state; we are

[19] Such as Jacques Derrida; see Derrida (1978; 1982; 2016).
[20] See Brandom (1994; 2000; 2004; 2009).
[21] The word *object* is being used here to indicate a sense of being different from another object or entity, and not to suggest that human beings do not have volitional and intentional dimensions.

placing it in the logical space of reasons, of justifying and being able to justify what one says' (Sellars, 1997: §36), and what follows from this is that we can and should understand and use concepts specifically in relation to antecedent, contemporaneous and applied constellations[22] or networks of meaning (and this in turn requires us to give an account of the different relations that there are and can be between our utterances and these networks). Reasoning within this space involves the giving and asking for reasons, where this activity is understood as making a commitment in the world, with that commitment referring to the circumstances surrounding its content and its consequences.[23]

As types of judgement, concepts can be understood as rules for determining what is an appropriate reason for doing something. This Sellarsian-type remark then implies that we can connect reason-giving and reason-determination to conceptual framing and use. In a sense, this is the key to a non-representational inferential semantic description of human behaviours. Rules or rule-sets can be categorised into various types: legal rules, which consist of specifications, conditions of application and consequences; social norms, which consist of those customs, traditions and expectations that act to regulate the correct behaviour of individuals in society; organisational rules, which govern the internal operations and interactions of members of organisations; ethical rules, which must have, if they are to have any justification at all, some transcendental framing with regards to how human beings should behave; and personal rules, which are deeply rooted in an individual's beliefs and experiences. These rule-sets have a number of common features, such as their capacity to restrict, for different reasons, human behaviours (actions, utterances, thoughts, performances and the like), their capacity to frame and reframe the hermeneutical possibilities of actions, utterances, thoughts or performances (and more), and their capacity to organise systematically these sets of behaviours (actions, thoughts, utterances and performances) of individuals, collectivities of individuals, and discursive and material objects and object-configurations.

Reasons are different from, and operate in different ways to, physical causes. There are also good and less good reasons for doing something. Robert Brandom (2000: 61) has argued that when we talk about distinguishing between good or bad reasons, or at least

[22] A constellation in the sense that I will be using it here arises out of a conjunction of elements that are relevant to a situation, a setting, a process, a text. The philosopher Walter Benjamin (see, for example, Benjamin, 2007) used the word extensively in this way.
[23] See Brandom (1994; 2000; 2004).

determining what is a better reason for doing this rather than that (this is a form of practical reasoning), we are making an inferential judgement about the specific merits of the two sets of reasons we are considering. These inferential judgements are commitments that we make in the world, and consequently on every occasion that we make a judgement about a good or bad reason, or a better or worse reason, we are also making a series of knowledge claims about the world, those claims being implicit in the three semantic networks or constellations within which any utterance we make, rational or otherwise, is enframed:[24] the network of antecedent meanings, the store of current conceptual meanings, and the way concepts are used in the lifeworld (see Chapter 1).

However, transposing a reason into a commitment does not allow us to distinguish between good and bad reasons for doing something, since a commitment to anything is simply another way of saying that this is what I believe to be true. Calling these transpositionings inferential in turn adds very little to our understanding of how we can articulate what is in the world or say what should be there in the world. Inferential relations only have a content in relation to how they connect or attach an object to another object. Using the concept of inferentialism in the way that Brandom (1994) does tells us very little about what it is, or rather what it can be. It is too general to allow us to understand what those relations are between language and its referent, between mind and world, and between a thought and an external object. There are a number of important conceptual relations that might allow us to do this: negating (following Hegel, this is Brandom's [1994] preferred use of the concept),[25] absenting, categorising, contextualising, forcing and more, and, although these can be thought of generically as inferential relations, what they allow us to do, if we use them in appropriate ways, is give some content to the meanings we can ascribe to our utterances about object-relations, and thus about objects themselves. We make different types of commitments to the different types of meanings that are embedded in our three networks, and consequently when we try to explicate semantically our utterances

[24] This is a word used by Martin Heidegger (1962), translated from the original German word, *Gestell*, to denote those social, geo-historical, temporal, epistemological, political and discursive frames within which our utterances are ineluctably embedded.

[25] Brandom understands Hegel's (1977) approach as us becoming agents only and if this agency is understood by other agents. This means that normative statuses such as commitment (especially this status) and authority are instantiated by social practices of reciprocal recognition. Consequently, Brandom argues that these processes of self-conscious recognitive (essentially learning) attitudes can take on a radical magnanimity and trust, which, following Hegel, means that we enter a new age of spirit.

and commitments, we have to pay attention to the different modes of reasoning within each of them.

For example, rationality as a concept is plurisemic, multifaceted and discursively formed. We can give a number of meanings to it. The first of these is that it is a word whose only semantic content is that it is good. A second meaning that we can give to the word is that it connects thinking and action. If the two are properly aligned, then the relationship between thought and act is logically, semantically and comprehensively apt. A third meaning that we can give to rationality is that it is a word that denotes a truthful state of affairs. Rationality as a concept can also point to behaviours that society considers to be acceptable, whereas irrationality can point to behaviours that society considers to be unacceptable. This set of meanings is socially, temporally and spatially relative. Rationality as an object-word can also refer to a social practice such as exchanging goods, with a distinction being made between what theorists have called a perfect choice, which indicates a form that rationality might take (a person is being rational if they make the perfect choice), and an imperfect choice, which indicates a form that irrationality might take (a person has not acted in accord with the criteria of rationality that they are committed to, so that the exchange of goods is not in their best interests or those of other people in society). A rational(ity) number in mathematics represents a ratio of two integers. Rationality, in addition, can be used to denote an ethical act or an act by a person that can be considered simpliciter to be ethical. It might also refer to certain rational characteristics of a person; for example, we can represent a person as rational insofar as they have acquired certain dispositions, such as being autonomous or being self-determined. Rationality as a concept can be used to suggest that a person acts from sufficient and not from insufficient reasons. In the latter case, they are acting irrationally; in the former case, they are acting rationally. Finally, we can say that rationality is an ideal state which is understood as the pinnacle of an existential process.

We are committed, then, to the human disposition of reason-giving, and justifying beliefs and actions through the giving of and asking for reasons. This involves both the contents of those judgements, perceptions and notions of the world, and the methodological contents of the way we can and do access the world, both empirically and meta-empirically. We also need to determine the normative dimension to these processes, and this inevitably commits us to an explication of the idea of rationality, and consequently of practical reasoning. This comprises, in the first instance, examining an important element of the argument that human beings have the capacity to be rational, and this comprises an alignment of their

intentions to a set of normative commitments. We might want to call this capacity, or disposition, reason-giving.

There are several ways we can understand the idea of reason-giving. The first of these is that human mindedness is the ability to commune with reasons. Another view is that reason-giving can be understood as the way discursive activities work by searching for the best reasons for action, subconsciously or consciously. A third set of meanings that we can give to the idea of reason-giving is that it refers to the structures of thinking and acting, that is, material and discursive objects, relational objects, configurational objects and those embodied features of the human being, such as the capacity to speak, think, believe, move and the like. A fourth set of meanings that we can attach to it is that reason-giving is one, and only one, disposition of human beings that some people have acquired, in part or as a whole, and it has universal qualities only insofar as human beings have dispositions, besides other things. In addition, it has been suggested that describing human life as reason-giving or in the space of reasons is to distinguish it from deterministic, scientistic and atomistic views of the world – experience should therefore be understood as rational (the pursuit of reasons for action), rather than as physicalist.

If we act rationally, the end that we desire may not be reached, with the understanding that whether it is reached or not is irrelevant to whether we have or have not acted rationally. This is because rationality can be construed, and is best construed, dispositionally. It has a set of qualities that allow any reasonable observer to say that this person is acting rationally. This set of qualities might include: not acting from reasons that as far as the person can see would only benefit that person and not any other person; acting from reasons that are wholly selfless;[26] having clarity about whether the reasons the person thinks are driving their actions are indeed the prime motivators of those actions; having full knowledge of all the possible reasons there might be for acting in a particular manner with regards to a particular issue; and so on. However, in order to determine whether a person has acted in a rationally dispositional manner, we have to, in the first instance, determine a best possible set of reasons for acting in the world in a particular set of circumstances.

Since the concept of a reason is central to my focus in this chapter, I need to show the different ways that a reason can be understood and used. A reason can be an argumentative statement that attempts

[26] In Derek Parfit's (1984) book, *Reasons and Persons*, some reasons are provided as to why the person who is purely self-interested cannot at the same time also be rational.

to explain a belief or an action, where an explanation also includes a surfacing[27] of those pre-texts, sub-texts and inter-texts that are there but which are only occasionally made explicit. A reason might have an evaluative sense, in that it provides a justification for an action or a sequence of actions – this justification has a coherentist, logical, rational or epistemic form, or a combination of these. A third possible meaning that we can give to the term is that we have identified a state of affairs in the world, and we wish to understand what caused it. This refers to the reasons for an event or happening in the world. A reason might be used in the world to denote a capacity or attribute of a human being, as in human beings having a reason-giving capacity or dispositional concept of reason-giving, either in a communal or an individual sense. A reason might also be used to indicate a sufficient ground of explanation or of logical defence, as in a court of law. A reason might have been given the sense that it makes some event or activity in the world intelligible. A reason can also be used to mean a power of comprehending, inferring or thinking, especially in a logical and rational way, and a form of practical reasoning is that it is a general human capacity for determining what we should do. Finally, we can understand a reason as a part of the concept of rationality – a rational human belief or action is one in which a sufficient reason (or set of reasons) is provided, and this reason (or these reasons) is relevant to the belief or action.[28]

Such an argument (about reasons, reason-givings and rationalities) only makes sense within a particular enframing of the object-world; for example, if we adopt a physicalist view of the world, with no distinction being made between mind and matter, then reasons and, separately, rationalisations for those reasons are literally irrelevant to true or apt explanations of these phenomena. They cannot play a part in the causal sequence that we might want to explain, and this includes learning activities. This would suggest that if a non-physicalist approach to volition and constraint is adopted, then a notion of giving and asking for reasons as the essential characteristic of the human being is needed, and this would be in accord with a view that human beings have intentions, and that these intentions are not irrelevant to any explanation we might want to make of an event or causal sequence.

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[27] Or, as Brandom (1994) put it, making them explicit.

[28] It never ceases to amaze me how academics can write learned articles about a topic, from which they can infer certain types of normative behaviours, and yet in their day-to-day work as academics they operate through different types of normative behaviours which are in contradiction to them. For example, they endorse Foucault's (2010) care-of-the-self ethic, and then enthusiastically impose authoritarian and rule-bound structures on the people they have power over.

The difficulty then becomes that reasons (which by necessity have a directive quality about them) are embedded in networks of reasons for doing things, which exist independently from the consciousness of the individual, although clearly the person has the potential capacity to access them. A person can have a reason for their action, is convinced that the reason that is given by them is the actual reason as to why the action took place, and can believe that the action would not have taken place without the reason being developed prior to the action. And yet, the reason that is given is not the real reason for that action. Furthermore, the rationalisation of the original reason is not necessarily a distortion of that original reason; it may be a re-forming of that reason which now entails the placing of the action in wider social, political, economic and discursive contexts. The purpose is to grasp the reasoning action in its setting of rules, practices and conventions, and fundamentally in peoples' intentions. What this suggests is that there is always a volitional relationship in any particular action or event. This in turn implies that in most circumstances the person is a skilled knower, especially with regards to their own reasons for their actions, even if the original and motivating reason is subsequently rationalised over time.[29]

A theory of meaning

A semantic theory is one in which the specifications of meanings are determined in a symbolic system. There are two general approaches: referential approaches and use-theoretic approaches.[30] The first of these understands the semantic properties of linguistic expressions in a conceptual form as broadly referential, in that their primary relation is to extra-linguistic objects and other language sets. We talk and think in relation to the referential properties of these other objects. The use-theoretic approach, on the other hand, focuses on the regularities or rules of use. Under this conception, it is these rules and regularities which account for meaning and conceptual content. However, these have mediated referential relations to the outside world.

The meaning of a concept, object, proposition or meta-theory lies in the mediations and negotiations we undertake in the world. This formulation does not deny the existence of a referent, as some use-theoretic approaches are inclined to do (for example, Derrida,

[29] See Scott (2021).
[30] See Steinberger and Murzi (2017).

1978);[31] however, what it does do in a Kantian sense[32] is distinguish between an unknowable world and a world that we have come to know. This positions the truth-value of a linguistic utterance or proposition about a concept, object, object-configuration, object-relation or person in the relationship between mind and world. A theory of propositions, in which the utterance represents something which is external to it, corresponds to it, is isomorphic with it, is unsatisfactory for a variety of reasons.[33] The issue still remains as to what type of content-meaning we can give to linguistic expressions, since all we have established here is the possibility of these linguistic expressions having a meaning.

I have already suggested that reference cannot explain in any complete sense content, although I have also suggested that content cannot be satisfactorily explained without pointing to a referent, and this means that a semantic theory always assigns a value and a substance to an expression, which we can call its contents. I now need to determine the place of context or indexicality that enframes those contents (value and substance) in my picture of the world. Expressions then become context-dependent, and these contexts can be understood as belonging to different registers, constructs, modalities, modes, disciplines, texts and the like, with each of them having their own way of working. Every reference, then, of a linguistic expression must seek to show its context of utterance, and, in addition, its circumstance of valuation – how it is received in the world. There is also the circumstance in which the utterance does not just have a context but works – in a performative sense – to create one, and this means that the meaning of an utterance depends on the state the world is in. Furthermore, utterances expressing a practical commitment have a normative or prescriptive force – they are concerned with doing, rather than with describing a state of affairs.

If all sense-seeking and sense-making is through culturally and historically located interpretive frames, then knowledge of objects is perspective-bound and partial – it is relative to these frameworks. Underlying this argument is a notion of a universal hermeneutics, where understanding always involves interpretation, and where interpretation is always already present (see Chapter 3). Interpretation is not, however, arbitrary but takes place through interpretive frames,

[31] See also Derrida (1982).
[32] What this refers to is the distinction that Immanuel Kant (2007) made between noumena and phenomena.
[33] See Rorty (1979) for an explanation as to what these reasons are.

which are themselves located within the background of all our beliefs and practices. Even apparently simple actions, such as learning that the capital of the United Kingdom is London, or that the square root of 36 is 6, can only be understood in terms of an immersion in, and inseparability from, a background, and they are therefore enframed (see Chapter 1).

Learning as a concept

I am concerned, above all else, in this book with the concept and practice of learning, and the positioning of these important activities in a theory, which we might want to call semantic, bearing in mind that theories are always provisional, and that they include an ordering of things or actions. Theory or theorising is a concept. Consequently, in line with the argument that I have set out in this book so far, *theory* should be understood as an acquired disposition, so that as a concept it takes the form of *theorising*. Theory is not just a type of propositional knowledge, but an active, engaged and committed activity in the world. Any and every methodological approach that I adopt in this book points to the possibilities and, as importantly, limitations, of a word, word-set or linguistically structured concept, such as theorising(s), with the purpose of determining meaning (see Scott, 2021). There are perhaps 12 different theories of learning: epistemic, instructional, educative, bureaucratic, ethical, cognitive, behaviourist, materialistic, sociocultural, transgressive, phenomenological and curricular, in no particular order.

The first of these is epistemic. There are three sites of knowledge: the world and its contents, the mediating arena between the contents of the world and objects in the mind (this is what we might want to call learning sites, which are also contentful), and the contents of the mind that allow us to make judgements, perceive the world and reflect on what we have perceived. To separate out these three sites is itself to make a judgement about the contents of the world and how we can access them. It is also to make a claim that there are always non-conceptual external constraints on what we perceive to be the contents of the world – we cannot make limitless claims about its contents because the world does not allow us to do this. What this argument cannot do is identify what those contents might be, or determine what is or what is not in the world. In order to do this, we need to identify the means by which we access the world, and to show how these means (principally learning acts) mediate the world for us (see Chapter 3).

In order to make sense of the concept and practices of instruction[34] and education, in the first instance, we might want to see how they operate in opposition to each other. So, we can say for this or that reason, or this or that set of reasons, an educative model gives a better account of learning than an instructional model. We have to be careful here about how we conceptualise these terms for two reasons. The first is that the account we give may not capture the subtleties of each concept at work in the world, and the second is that treating them as oppositional constructs may distort the reasonable argument that some aspects of learning are better captured by the term *instruction* and other aspects by the term *education*.[35]

How are these two concepts used in the lifeworld? An answer to this question requires an examination of the possibilities of each concept, and this is complicated by the fact that we are dealing here with two concepts that can potentially enter into a number of different types of relationships. A first relationship-type is that one of these concepts is correct and the other is incorrect; a second relationship-type is that one of these concepts is a more adequate account of learning than the other; and a third relationship-type is that one of these concepts is a better descriptor of some aspects of education and the other is a better descriptor of all the other aspects of education that are not covered by our instructional model. If we want to sustain the first of these types, then we have to show[36] in relation to those criteria we might want to use for determining truthful knowledge (epistemic adequacy, coherence, rationality and referentiality)[37] that our understandings of these terms meet the demands of these criteria. We also have to provide an argument that can show that it is possible to say that one is better than the other. With regards to the second type, we have to show, in addition to satisfying the criteria for truthful knowledge, that the issue is not that of making true or false judgements about the two concepts, but of one being a better and more useful descriptor than the other. With regards to the third type, there is a qualitative difference between the two concepts insofar as our concern is now with the concept of learning itself, and that some activities that can come under this concept can be better delivered through an instruction or training model, and others can

[34] Instruction is indubitably a training model.
[35] There are some politicians, policymakers and academics who want to treat all learning activities as instructional or training activities, and to abandon altogether those characteristics and attributes that have been associated with education. This would seem to be a matter of operative power.
[36] This form of words denotes a logical relationship.
[37] For a fuller discussion of these criteria for true knowledge, see Scott (2021).

be better delivered through an education model. What this requires is an inclusive model of learning, and a way of showing that instruction and education models can subsume all those activities that we want to attach to the notion of learning. We are dealing here with object-relations and particular relationships between concepts, as they play out in a life or a collection of lives, individually or collectively.

A fourth interpretation of the concept of learning is bureaucratic. The major goals of this object-configuration are to improve the effectiveness and efficiency of the public sector, to enhance the responsiveness of public agencies to their clients and customers, to reduce public expenditure, and to improve managerial accountability. These efficiencies are achieved in a number of ways: by making employees work harder and in more productive ways; by constructing and using a particular type of knowledge, broadly conceived as technicist and bureaucratic; and by injecting into the system as much competition as possible. New hierarchies are established, so that old hierarchies constructed round a notion of particular skills and capacities are replaced with hierarchies that are underpinned by bureaucratic forms of knowledge. The way signs are interpreted, and judgements are made, is reconstituted by the bureaucratic model of organisation. Furthermore, these acts of interpretation and judgement are reduced to binary choices, and this affects how we can understand the object and how we can interact with it. Professional loyalties are marginalised, and rewards and sanctions are tailored to fit this model, so that knowledge construction assumes a new form, and this relates both to the behaviour of the member of staff within the institution and to their work (see Chapter 7).

A fifth learning construct is ethical. This assumes that normativity is an essential component of ethics – if we are minded to develop an ethical theory, or if we act or purport to act in an ethical way, then we have to, if we want to act in a consistent manner, be concerned with the normativity of actions, attitudes or dispositional states. The focus here is on what we ought to do in the life course. Normativity, however, is not just focused on right or correct behaviours, but also has implications and consequences for epistemology and semantics. What this suggests is that learning is an essential element in any reason-giving argument that is being proposed – we are, in other words, learning, and meaning-making, organisms in a foundational sense (see Chapter 11).

Behaviourists make three interrelated claims. The first of these is that if investigators are trying to understand the psychology of a particular human being, they should not be concerned with what is in this person's mind, but with how she behaves. The second claim is

that human behaviours can be fully and comprehensively explained without recourse to any form of construct or event in the mind. The source of these behaviours is the environment, and not the mind of the individual. The third claim which behaviourists are likely to make, and which follows from the first two claims, is that if mind-specific terms are used as descriptors, then they should be replaced by behavioural terms, or, at least, those mind-dependent constructs should be translated into behavioural descriptors. Learning is therefore understood as associational, without recourse to states of, or events in, the mind, with an emphasis on the reinforcement histories of people. Any reference to experiences (especially if couched in the language of states of mind) should be replaced by observations of events in the environment, and references to thoughts, ideas or schemata should be replaced by references to overt observable behaviours and responses to stimuli.

In contrast to behaviourist perspectives on learning, there are phenomenological approaches. Phenomenology is a meta-philosophy that focuses on the three key aspects of learning: the relationship of the individual to and with the world, involving a process of change; the subsequent conception and activation of being in the world; and how our descriptions, words, schema and theories can provide us with some purchase on that world. The focus is on the givens of immediate experience, and phenomenology is an attempt to capture that experience as it is lived, both by the individual herself and by the external observer. This knowledge-making activity is directed in the first instance to the things in themselves that are the objects of consciousness. This entails a learning methodology which foregrounds subjective experiences, and which understands them in their own terms, both linguistically and conceptually, while at the same time treating these two modes separately. This presupposes that the experience of others is accessible to us, even if with the greatest of difficulty. And this points to the break with behaviourism that phenomenologists generated. Whereas behaviourists are concerned above all with the behaviour of individuals and ignore the inner workings of the mind, phenomenologists understand consciousness as essential to any theory of learning.

This is consciousness as it is experienced from a particular person's point of view. It is thus intentional or has intentionality – it is directed towards something, such as an object in the world. It refers to how we experience objects in the world and the meanings they have in our experience, that is, the value of objects, the values given to objects in the world, the flow of time and evolving constructions of the self

and events in the world; in short, the experiences we have in our lifeworlds. When we are conscious, we are conscious of something. The experiences we have – and these include those experiences as they are framed through particular concepts, thoughts, ideas, images and so forth – are mediated. There are also enabling conditions of intentionality, such as our embodiment, our cultural context, our language and much more.

Being conscious is uniquely about experiencing things in the world, living through them and performing them, characterised as the three stages of learning: accessing objects in the world, internalising those objects and then externalising them (see Chapter 3 for a full account of the apperceptive process). The internalisation process includes processes such as evaluation, reflection, familiarisation, recategorisation and reformulation. There is a time component, in that when we are angry or joyful, the intensity of the experience is such that the reflective elements are either downplayed or postponed. What this means is that these reflective processes can take place at different moments during the learning sequence and in different ways, so, for example, a learning action can be performed at the site of sensation or at the site of internalisation.

Cognitive theories of knowledge and learning focus on structures and processes in the mind, and on internal representations of reality by the learner.[38] Knowledge, therefore, has both external and internal referents. Cognitivists suggest that there are a number of interactive learning mechanisms located between the stimulus (the sense-datum) and the person. The first of these is accumulation, and this is where there is little schematic formation in the individual, and where learning consists of recall and applications in situations that are similar to those in which the knowledge was originally received. The second is assimilation, and this is where a new element has to be addressed and made sense of by the individual; this process is still essentially passive. The

[38] For example, Jean Piaget (1962) proposed that children and young learners progress through an invariant sequence of four stages: sensorimotor, pre-operational, concrete operational and formal operational. Those stages reflect differences in children's cognitive abilities. The learning process is therefore iterative, in which new information is shaped to fit the learner's existing knowledge, and existing knowledge is itself modified to accommodate the new information. Piaget's theory has a variety of implications for learning and instruction, such as, that the learning environment should support the activities of the learner. Learners acquire knowledge through their actions. As a result, a learning environment is created that encourages learners to initiate and complete their own activities. This is an active, discovery-oriented, environment. Feedback is considered to be an essential requirement for the actions of the learner, and this relates fundamentally to future learning experiences. In addition, learners' interactions with their peers are an important source of cognitive development – peer interactions are essential in helping children move beyond egocentric thought.

new elements are easily absorbed, indeed assimilated, into the existing schema of the individual. The third element is accommodation, and this is where the new element does not and cannot fit the new schema, and thus a process of transformation of both takes place, that is, the original stimulus or object of learning and the schema that is attempting some form of accommodation with it (see Chapter 9).

What distinguishes a materialist complexity theory of learning from conventional theories is the different focuses of researchers and investigators, so that it is now the flows and relations between objects, rather than the objects themselves, that are the focus of attention. Society is characterised by notions of continuous emergence, flux and change, which, although non-predictive, can be adequately captured in language. Objects in the world cannot be characterised by their essential qualities, but only through their interactions with other objects. Complexity resides in all these various interactions which produce new objects (characterised as different forms of structure), and this results in complicated arrangements of material and human objects and object-relations, which, because they are difficult to characterise, rarely allow definitive accounts of what is going on to be produced. It is the complexity of these object-interactions and their subsequent and temporary coalescences that makes it difficult to provide complete descriptions of them. The epistemic level is not synchronised with the ontological level, because researchers and investigators have not developed sufficiently their instruments and conceptual schema for capturing something that is both ever-changing and has too many elements to it; that is, it is too complex. However, this does not categorically rule out the possibility of providing more complete descriptions of events, structures and mechanisms, and their relations in the world, and this suggests a notion of human fallibility, which means that our actions (which correspond to learning episodes) are corrigible. The twin elements of complexity and temporal emergence (where systemic formations are understood as not incommensurable) do not rule out correct descriptions being made of activities in the world, only that these elements can create considerable difficulties.

There are two more theories, conceptualisations, discourses and configurations of learning that I need to briefly comment on: curricular and transgressive. In the first of these, curricular formations of learning, the focus is always on learning as a lifelong expression of identity. It therefore refers in the first instance to those dispositions, cognitions, processes and embodiments that we think are appropriate for inclusion in a curriculum. In the second instance, each of these

objects is pedagogised: the object to be learnt has logical and other types of inferential connections and relations with the way it can be learnt – its pedagogy being derived from the constitution of the learning object, its learning modus operandi, and the characteristics of the learning environment. It also involves a series of rational choices and, consequently, the giving of reasons for those choices. In short, this *Bildungstheorie* is future oriented, semantically conceived, fundamentally values- and virtues-based, ethically and compassionately driven (at curriculum, pedagogic and learning levels) and lifelong (see Chapter 4).

The second theory is a theory of transgression. In the first chapter of this book, I identified a variety of frames or framings that in a transformational sense might enable people to resist or counteract those oppressive forces that are ineluctably a part of modern societies: the frame of molecules and atoms; the frame of associations between variables; the function or use-in-the-world frame; the frame of events; the linguistic frame; the universal hermeneutic frame; the frame of structure and structuring; the semantic frame; and the universal or transcendental frame. These frames, then, are manifestations of difference and, in particular, the determining difference between the different ways people understand the world. Framings can be construed as onto-epistemologies. Deframing or trans-framing, as an act of resistance (and learning), is a movement upwards or downwards or sideways, but always a repositioning of the way we can see the world (see Chapter 11).

These 12 different learning formations – epistemic, instructional, educative, bureaucratic, ethical, cognitive, behaviourist, materialistic, sociocultural, transgressive, phenomenological and curricular – are different because they understand learning and its elements in different ways. This interpretive or hermeneutic element is ever-present in any semantic history (or genealogy) of learning. In the next chapter, I draw out some of the connections and relations between knowledge and learning that exist in the real world. There are a number of ways in which these relations and connections can be articulated. The first model is a straightforward realist model in which the contents of the world are able to be processed by the mind (albeit the mind of an individual in a sophisticated and developed semblance) without some form of mediation (through intuition or temporal/spatial transformation) lodged in the mind. The second is a mediated realist model. Sensory input in this process goes through a number of phases: world-to-mind (perceptual relations), initial sensory formation as a thought

(neuronal relations), thought-through-language (linguistic transformation), language-into-thought (conceptual integration), thought-on-thought (reflexive integration), and manifestation of the thought in action (praxis) or reflection (contemplation). These are summaries of the two models, which in the next chapter will be developed in a more sophisticated way.

3
Learning and knowledge

In trying to understand how a concept functions in the world, it is important to contextualise the way it functions within our three networks or constellations of meaning: antecedent frameworks, coextensive frameworks and pragmatic frameworks. In stating this, I am invoking a truth property; indeed, I cannot say anything at all, from the most profound to the relatively trivial, without doing this. In trying to discover what the relation between knowledge and learning might or could be, I am committing myself to a truthful account of these two concepts and the object-relations that connect the one to the other. If I make a comment about the meal I have just eaten in a restaurant, I am at the same time making a comment about the truthfulness of my comment. If I correct a student's English, I am remarking on the truth or otherwise of that correction. Truth as a concept and as a practice is undeniably a part of the complex webs and practices with which we surround ourselves. We cannot do without the idea, and yet, as I have suggested above, concepts are multisemic, semantically contested, networked, interactive, powerful and dynamic.

What this means is that truth as a concept can be understood in a number of different ways. I can think of a number of possibilities as to what these might be, such as, true knowledge might refer to hypotheses that work. Here, the burden of proof for whether a statement satisfies a set of criteria is that when this hypothesis, referring to a proposed relationship in the world, is deployed in a practical sense, it works, or at least leads to effects that the hypothesis predicted. A second possibility might be that true knowledge is inter-subjectively agreed knowledge. Here, the burden of proof is that the truth criterion for this statement about knowledge resides in whether or not the claim being

made is agreed with a community of knowers that have an interest in it. A third possibility might be that true knowledge can be justified empirically; and here, the burden of proof for any statement that I might want to make rests with some form of true relationship between what is in the world and my knowledge of it. The most common form that this can take is correspondence or mirroring (cf. Richard Rorty's [1979] arguments against this position). A fourth possibility is that true knowledge is logically coherent, and that it is possible to identify, in a universal sense, certain correct relations and consequently certain incorrect relations between words, word-sets, concepts and forms of knowledge. Another credible position that can be taken asserts that true knowledge is such because we trust it. In effect, we have tried-and-trusted methods, deeply embedded in the social arrangements we have made, for judging whether evidence is reliable, including criteria for making these judgements.

There are five conceptions of truth (there may be more, but they have not yet been invented or codified): truth as correspondence, truth as coherence, truth as what works, truth as consensus and truth as warranted belief.[39] These different theories of truth are framed so that they point to a relationship between a statement and a referent, and, consequently, we can say, if we want to adopt a correspondence theory of truth, that a statement is true if it corresponds to something in the world. Again, we can say, if we want to adopt a conception of truth as coherence, that a proposition is true if it is consistent with a further set of propositions, and so on, until we exhaust the possibilities which inhere in this concept.

It is also possible for us to assert, if we ignore those siren voices that are pushing us towards the taking of a sceptical position about knowledge, that the referent in each particular case is of a different order, so, for example, a correspondence version of truth refers to a state of affairs, whereas truth as warranted belief refers to whether it satisfies an epistemological test to determine its value. Furthermore, some of these conceptions of truth allow for the possibility of a social element, whereas others do not. So, truth as correspondence would suggest that a belief in epistemic relativism is unsound, whereas truth as consensus is predicated on a belief that a universal ahistorical warrant cannot legitimately be developed. These different theories are framed so that belief in one precludes belief in another.

[39] For a fuller explication of these theories of truth, see Bridges (1999).

Correspondence notions of truth support the idea that if there is some sort of agreement between a truthful statement and something other than a linguistic account, then we are entitled to talk about its truth or falsity. It is the correspondence between the two that allows us to make the claim that we do. Some have sought to understand this correspondence notion as being between truthful statements and the facts of the world. However, any observations that we make about the world, including those that are integral to the knowledge-development process and can be construed as 'facts', are always conditioned by prior understandings we have of the world. Some word-objects and some conceptions, such as a fact, a statistic, information, data[40] and evidence,[41] are understood as basic and foundational, and thus as having a positive truth-value – a fact cannot be disputed, data is unchallengeable, a statistic is a truthful representation of something in the world, gathering information allows us to go on in life with some certainty, and evidence is required for us to assert that something is true. However, fact-based epistemic or semantic theories[42] are unable to determine how the real relations in social life, those between knowledge of the world and the world itself, operate. The real question, then, is to ask if anything can really be given, beyond reproach or criticism or questioning.

Facts are given, they are out there, they cannot be disputed. But, in reality, facts are simpliciter propositions, knowledge fragments, valorisations, processes, utterances, evaluations, embodiments or dispositions, which have attached to them a truth component. They are a means by which we can understand what is true or authentic; and, in addition, truth is frame-specific and valued in relation to the way we see the world, whether in atomic, associational, actual, linguistic, hermeneutic, structural, semantic or holistic framings (see Chapter 1). The truth of something because it is frame-specific has ideological leanings. However, we must be careful here for two reasons: ideology is

[40] Data, for example, is one of these integral constructs. There are questions to be answered (and answers are only rarely given) about the provenance of data, the relationship of data to truth, the placing of data at the centre of our inquiries, the way data seems to have an objective value-free dimension to it, the sense in which data cannot be questioned, the cohabitation of data and fact, the exclusion of interpretation at this basic level, indeed the ascription of this level as basic.

[41] Becky Francis, the Chief Executive of the Education Endowment Foundation at the time of writing, speaking about the potential return of grammar schools recently, warned the government to 'focus on the evidence, not ideology', and thus in this apparently innocuous statement argued for an absolute relationship between truth and evidence, or at least a certain type of evidence (Booth, 2002: n.p.).

[42] This includes Wittgenstein's (1961) early representationalist theory of the *Tractatus* and Searle's (1984; 1995; 2011) status object theory.

a hinge or foundational concept, and it therefore has certain properties, such as being semantically contested, networked, interactive, powerful and dynamic; and, in addition, the polysemic nature of the concept means that we can use it in a variety of ways.

A first set of meanings that can be given to the notion is that ideology is an action-focused set of beliefs, and, consequently, consists of a reason or reasons for doing something in the world. It is local and specific, in that it does not refer to any type of worldview or *Weltanschauung*, except in so far as all ascribed meanings have a relation to meta-concepts such as truth, objectivity and reality. A second set of meanings that we can attach to the concept understands it as an obfuscation of reality. People are deceived about the actual conditions of life that they find themselves in. What this means is that given the right conditions and circumstances, ideology could be stripped away, and we would see the world as it really is, and we could live our lives with and through a noumenal – to use a Kantian word in translation – rendering of this world.

A third, and perhaps more significant, set of meanings we can give to the notion of ideology is that all our dealings with and in the world are in some sense or another ideological. All our actions in the world, our beliefs about this world and about ourselves, the way we conduct ourselves and can conduct ourselves in the world, the use of our sensory apparatus, our deployment of meta-concepts and conceptual frames, come from a particular and specific set of ideas or from an ideology. There is nothing else: there is no sense of an ultimate reality that we can access. What matters is our *Weltanschauung* or worldview, and this is clearly in conflict with another, or even several other, *Weltanschauungen* or worldviews. What it does not mean, however, is that we always act, see the world, believe things, that are necessarily in accord with our worldview or a worldview. Human beings are sometimes misguided or confused. This interpretation of the notion of ideology is different from our second rendition, because it makes a strong case for there not being a correct version of reality, only that reality is always ideologically mediated, even if certain key concepts and conceptual frames are deemed to be universally apt.

There is also a much-used notion of ideology, deployed especially by politicians and policymakers, which contrasts ideology with pragmatism. As with all the meanings attached to concepts, both concepts are valorised, or perhaps, valorised and revalorised many times over, so that pragmatism (used in a non-philosophical sense) is given a positive value, and ideology is given a negative value. Ideology is then understood as a committed and transparent set of policy prescriptions,

with a clear and open relationship to a coherent set of values and ideas. Pragmatism is understood, in contrast, as a set of policy prescriptions, which are not transparently connected or related to any larger set of ideas or frameworks. They are not enframed in any real sense, or so the argument goes.[43] This is a mistake, as all human activities are enframed in some sense or another, and this knowledge claim, in itself, points to the need to accept that some meta-claims have a universal or transcendental status.

We can see this more clearly in the account of ideology that I have developed here.[44] Truth becomes a feature of an all-encompassing configuration of beliefs (in a discursive sense) as a system of interrelated ideas or propositions, logically related or historically embedded or inferentially derived. So, the truth quality or component of any remark I make about learning resides in a system of other truths, in that it coheres with them, is justified by them, can be inferentially derived from them, or makes rational sense within the boundaries of that system. That system has to be linguistically sufficient, and does not or cannot refer to events, occurrences, happenings, outside of the language itself. And yet within this conception of truth as coherence, nothing seems to prevent there being many different systems or constellations of thought-objects.

Truth as a concept can have a pragmatic orientation, understanding this in two ways. The first of these is that since a number of theories of truth can potentially be developed, each of which is internally coherent, what ultimately happens is that at different points in history some can be shown to be more useful than others, and consequently they will be in the ascendency. More useful systems will survive, others will be discarded. The second pragmatic take on the matter of truth is deflationist or minimalist in orientation. Given that we cannot have an absolutely correct appreciation of truth, even if we have to use it in our activities and utterances in the world, what we need to do is put the idea of truth to one side and develop a more open-minded and open-ended process of comparing and using our belief systems. Such a process would be useful in its own right, even if it lacked any final endpoint.

Another attempt at defining or saying what truth is requires us to understand it as the development of a set of logical truth conditions that we can apply to our utterances in the world – so we can say that

[43] The argument, of course, also includes the idea that sometimes it is legitimate to put your principles to one side, in order to get something done.
[44] Instead of concentrating on the truthful or untruthful status of a language complex, simple or otherwise, it might be better to focus on sentences or assertions taken one at a time.

if we say this or that, inevitably we attach to these statements a set of truth conditionals. The intention here is and was to construct a mathematical language or set of symbols that would assign truth conditions to each correct sentence in a language, without also at the same time making use of semantic terms – to strip language, or the means by which we communicate, of any valuations except insofar as these values can be thought of as truth conditionals. These assertions have two consequences. The first of these is that language systems, and consequently our utterances, are understood as in some way transparent in their use – the world-to-mind and mind-to-world set of relations is unmediated in its passage or process. The second consequence is that we now cannot talk with any legitimacy about matters of aesthetics, ethics, semantics, human well-being and the like. The danger about reducing truth as a concept to truth conditionals is that it forecloses on the idea that languaged assertions are multifunctional. Some assertions are not truth bearers, even if some are. Rather, they are acts of imagination, useful fictions, valorised expressions and the like. The difficulty still remains: how do we truthfully distinguish between truth-bearing and non-truth-bearing utterances and assertions.

In my attempt at saying what learning is and what it might be, I am committing myself at every step of the process to giving a truthful account. This truthful account includes, among other matters, the important (a valorised assertion) relationship between knowledge and learning. I am, in the first place, committing myself to its importance. I am also committing myself to a small number of foundational or hinged propositions, which have some credence, and which can be thought of as being essential, if we are using a language, to our language games, thinking processes and conceptual schemes.

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A theory of learning, given a more explicit rendition in the first volume of this work (Scott, 2021), pivots on the idea that there is an entity called, for the sake of convenience, a person, and that this entity has a relationship (both inward and outward) with an environment. It also positions learning as the key connecting link between mind and world. As a concept, learning is fundamentally related to knowledge, and, therefore, if we are concerned with learning and the practices of learning, we also need to make reference to what is to be learnt, and typically what we are aiming at in such considerations is some form of knowledge. As social

expressions and activities, these different forms of knowledge are given different statuses or have different attachments of importance. These valorised ascriptions do not lie exclusively in the intrinsic nature of each knowledge form, but also in the way these knowledge forms are realised in societies.

There are three sites of knowledge (to use a spatial signifier): the world and its contents (Immanuel Kant's noumena),[45] the mediating arena between the contents of the world and objects in the mind (this is what we might want to call learning sites, which are also contentful), and the contents of the mind that allow us to make judgements, perceive the world and reflect on what we have perceived (Kant's phenomena). To separate out these three sites is itself to make a judgement about the contents of the world and how we can access them. It is also to make a claim that there are always non-conceptual external constraints on what we perceive to be the contents of the world – we cannot make limitless claims about its contents because the world does not allow us to do this.

A prior question that needs an answer is: what is knowledge?[46] Only having answered this in a satisfactory way can we begin to understand what the relationship is between knowledge and learning. Further to this, if these two hinge concepts can be construed in different ways (they are multisemic), then we would have to accept that there is a variety of possible relations between them. The key to understanding what these relations might be lies with those relational concepts that are an essential element of any discursive configuration, given that I want to position the knowledge–learning complex as central to my work in this book. Examples of such relations are: maturation, progression, narration, possibility, projection, praxis, edification, justification, teleology, pluralisation, strength, rank or order, development, enablement, constraint, convergence, divergence, framing, categorising, subsumption, contiguity and so on. Only some of these relations are relevant to the knowledge–learning dyad in a fundamental sense.

Knowledge, or so I am arguing here, is integral to the four principal types of learning: cognitive (relating to propositions), skill-based (relating to processes), embodied (relating to bodily accomplishments) and dispositional (relating to the characteristics of a person). Knowledge and learning are homologous concepts, and what is meant by this is that both

[45] See Kant (1992a; 1992b; 2007). This is one reason why we should consider learning to be an important hinge or foundational concept.
[46] These matters were addressed in a fuller sense by David Scott and Robin Usher (1998) in *Researching Education: Data, methods and theory in educational enquiry.*

operate in the same way and that they share properties and meanings. Prior to cognitive, skill-based and embodied forms of learning is a set of dispositions, without which they would be unsustainable. Cognition comprises the manipulation of those symbolic resources (words, figures, idioms, terms, numbers, characters, signs, pictures, images and the like), which point to (although not necessarily in a mirroring or isomorphic sense) something outside itself. Skill-based knowledge is different from cognition because it is procedural and not propositional. Embodied knowledge refers to knowledge which primarily relates to the body or has a corporeal impulsion. Distinguishing between knowledge of how to do something (process forms of knowledge), knowledge of something (judging that claim in terms of its relations within and to a network of concepts, and making the subsequent commitments that this entails), conceptual knowledge (interacting with the world in a specific way) and embodied forms of knowledge (assimilating an action and being able to perform in the spaces associated with that action) is important; however, they are in essence all knowledge-making activities, and consequently they can be formulated generically as acts of learning.

An alternative view of learning and knowledge (a learning–knowing configuration; see Williams and Standish, 2015) has a triadic form, comprising propositional, procedural and acquaintance modes. The first of these modes is propositional. There are two claims being made here: learning as a concept and as a practice is an epistemic activity – it could be nothing else – and propositional knowledge refers to something which it is not. Some examples of propositional knowledge are: I live in a small house with another person on the edge of a large park in an urban complex; contradictions are configurations of a number of mathematical symbols that are never true regardless of the value substituted for the variable (x), for example, $x+1= xx+1= x$ is a contradiction; and the philosopher, Jean-Paul Sartre, was born in 1905 and died in 1980. These are fact(ing) activities, which is a form of knowledge development that conforms to the second mode: procedure or process. Other examples of procedural knowledge are: retroducing, where the person identifies the circumstances without which the concept that is being used could exist (it is therefore backwards looking and genealogical); painting a front door – a highly skilled activity; and learning by doing (see Dewey, 1938).

The third mode of knowledge for Williams and Standish (2015) is knowing-by-acquaintance, which for them is different from propositional and process forms of knowledge. This mode is sometimes referred to as knowing with a direct object – when we know something, we do so directly or through some form of immediate experience. It works,

or so the argument goes, through the learner having some familiarity with something or someone. An example of this type of knowledge is repeatedly listening to the works of a composer of music, Jean Sibelius, for example, to develop, or come to know, his music. Here, the type or constitution of the knowing activity is directly related to how it is learnt, thus reaffirming the binding relationship between knowledge and learning. These distinctions are also frequently used in an identity sense: to divide people into those who are good with their brains, those who are good with their hands and those who are good in making judgements, with all the subsequent valorisations that can be attached to them. As with all these identity divisions, they involve simplifications and reductions (they may also be hegemonic), an example of which is that knowing how to do something also requires a mastery of certain theoretical rules and procedures, which can be best expressed in a propositional form. All three of these knowledge modes have a history, and thus a semantic morphogenetic element.

For example, knowing-that or propositional knowledge has come to mean knowledge that is largely divorced from singular and detheorised subject matter (and, in some circumstances, has been appropriated to form a subset of knowledge known as *powerful knowledge*[47] – see Chapter 8). In like fashion, knowing-how or process forms of knowledge have come to show that mastery of a body of knowledge means that the person can apply this mode of knowing invariably and repeatedly in a number of different contexts. Furthermore, as Williams and Standish (2015) make clear, all these current and antecedent views of knowledge and learning, and the relations between knowledge and learning, are conceptualised within a framework of representational realism and its picture of the learner as a disengaged subject, who is separate from, and stands in a particular relationship to, an inert and passive world of objects. A particular notion of knowing-by-acquaintance may be able to correct this, while also offering, at the same time, a more sophisticated view of knowledge and learning. Stanley Cavell (1979) has developed a view of knowledge and learning which goes something like this: responding to a new experience in the world, or making an aesthetic judgement about the world, is, rather than having a comprehensive grasp of some fact or theory about the new object, or mastering some procedure for judging it, an activity of knowing and learning-in-feeling

[47] The notion of powerful knowledge is used by Michael Young and his associates (see Young, 2005; Young and Muller, 2007; 2010; 2015) to give credence to a weak argument and to its misrepresented parts.

(or developing a view of the object through an acquaintance with it). Knowing-by-feeling and learning-by-feeling, then, is a matter of making or exercising a type of judgement, which is different from, and more sophisticated than, a conceptual or processual response in learning. It also points to the transformative dimensions implicit in learning, and thus to the set of epistemic norms that I am trying to develop.

Apperception

In his book *Empiricism and the Philosophy of Mind*, Wilfred Sellars (1997) argued against, and with much force, the argument that what we receive through our senses is received in an unmediated form in the mind of the person doing the sensing activity. What this implies, unequivocally, is that we can never know, where knowing is understood as a function of the mind and not a function of the object itself, what the world is like or what is in the world or how particular objects in the world are actually structured. And yet, this set of knowledge claims would seem to rule out those things, which we are calling powerful objects, as having any influence, force or ability to contribute to the formation of minded objects. We are, however, hearing, feeling, seeing, smelling and tasting beings, that is, we conceive ourselves as taking part in an endless process of interacting with our environment. We are also thinking beings, and we think in languaged ways. So, our knowledge claims, including those which I have made above, are claims made within the boundaries of language – we are never in a position to think thoughts without a language. This does not mean that objects, processes, object-relations and object-configurations understood in an ontological sense do not exist, only that we do not have a language, a system of symbols, to give an account of them.

However, the problem still remains: if the senses or pure sense data do influence, force or impress themselves on our thoughts, how do they do this, and in what way? If we can provide a good argument for, or set of reasons in favour of, this proposition, then we can also say that not every account of the world is true or valid, and that some are more correct than others. And we can also say that we are dealing with a process, with distinct stages – from particular object to sensation, to learning, to thought, to configuration of thought and so on, with changes being made at each stage to the particular object going through the process. There is also another process that we can give some linguistic shape to, and this is the reverse of what we have been thinking about here – from

configuration of a thought, to a thought, to a learning instance, to a particular object. And further to this, we can say that some minded objects or objects-in-the mind do not have a relationship with the outside world in the first instance, although in the second instance, they may influence discursive objects, languaged objects, even material objects, although even here we are pointing to certain things in the world rather than saying what they are.

However, my concern is with the way the world, and, in particular, sense impressions, can limit the number of interpretations that we make about the object that concerns us. In other words, we have to interpret the world within the constraints and enablements imposed on us by language, as we have seen, and by the contents of our sense impressions. This formulation also includes a notion of self that operates outside of language – I use a language in a certain way and outside of sense data; I receive something from the external world. The 'I' is not just a linguistic conceit. Hermeneutical reductions and processes can take a number of forms: exclusions, inclusions, emphases, distortions, logical incompatibilities, semantic exaggerations, fantasisings, pluralisings, hierarchisings, re-categorisings, developmental or learning relations, morphologisings and more.

The essential concerns of this book, and for anyone who is trying to understand what learning is, are two relationships or connections in the world: mind–world and world–mind relations and connections. There are a number of ways in which these relations and connections can be articulated. The first model is a straightforward realist model in which the contents of the world are able to be processed by the mind (albeit the mind of an individual in a sophisticated and developed semblance) without some form of mediation (through intuition or temporal/spatial transformation) lodged in the mind. Language or other symbolic forms (words, pictures, mathematical symbols, musical notations and so forth, or in combination) can transparently connect a symbolic character or set of symbolic characters to a referent, which it is assumed will have a non-symbolic form. The key to this exchange is that it is preflexive, and what this means is that at the point of entry into the mind (this has spatial and temporal elements) the sensory input is pure – it has not yet been transformed in any way (through meditative, integrationist, developmental, critical and other processes). The world, insofar as we can understand it, is these sensory objects and their differentiating characteristics. This might solve the duality problem of inner and outer realms, because the suggestion is that there are no inner and outer realms. There is only one seamless process. What it cannot do, however, is solve the

transformation problem, because we still have to make sense of the mediating relationship between what we think might be a set of material arrangements and a set of ideas, between a reference and a referent, and between a world and a mind. A mind, we can speculate, only works with ideas and concepts that are ideational.

And yet, this hints at the idea that in relation to our attempts at describing the world, acting in the world and thinking about the world, there is something else with an ontological existence which cannot be expressed in a language or a set of languages. The inability of being able to express it is a function of the thought itself, since this is what the thought is about. A language consequently cannot be a transparent medium for the expression and transmission of every possible thought or set of thoughts. It is a filter, a gauze, a transformer and a change-agent in itself. What this means is that if we use a language correctly (grammatically, semantically, syntactically, morphologically, linguistically), we are acknowledging that language use has rules that need to be followed. Despite its enormous capacity, there are therefore limits as to what it can do. A further point about language is that to use it correctly, words have to be embedded in phrases, and phrases have to be embedded in sentences, and sentences have to be embedded in paragraphs, and paragraphs have to be embedded in texts. Morphologically, then, these parts of speech are tied closely together in the correct use of a language, and we are therefore entitled to say that this is how they should be used, but only if we commit ourselves to a sense of using language in a correct sense.

The educative or learning element of the process can be construed in the following ways: as an entry point or access portal to the mind of a person; as a fundamental change element; as a meeting point between world and mind, and then ultimately between mind and world (where world includes other minds); in a semantic sense, as a valued or valorised attachment at which the values attached to the object are changed or reworked in relation to the fields of valorisation currently in use; in an epistemic sense, so this is the point where sense data are construed as transferring and transformational information; as modality; as evaluative description; as minded capacity; as normative categorisation; as *Bildung*; as distinguishing marker; as ethical desideratum; as beyond human capacity; and more (see Chapter 2).

The purpose, or argument being proposed, is to describe a version of the world–mind and mind–world relationships which allows consideration of other and truer perspectives, and, in particular, to designate a learning and self-developmental dimension as an essential

element in these relationships. I am also trying to make sense of certain linguistic features, such as modal vocabularies, semantic vocabularies, intentional vocabularies and object-categorical vocabularies that we use in our descriptions of the world. These vocabularies consist of certain words and word-complexes that denote, or have come to denote: likelihood, permission or obligation in a modal vocabulary; meaning in a semantic vocabulary; intentionality in an intentional vocabulary; and object-identification in an object-categorical vocabulary.

Apperception, then, has a number of stages, which characterise most but not all world-to-mind and mind-to-world processes. These lead to the formation of what I have been calling propositional knowledge, where the defining element is a sensory input. The sensory input in the apperception process goes through a number of phases: world-to-mind (perceptual relations), initial sensory formation as a thought (neuronal relations), thought-through-language (linguistic transformation), language-into-thought (conceptual integration), thought-on-thought (reflexive integration), and manifestation of the thought in action (praxis) or reflection (contemplation). At each stage of the apperception process, one of four actions are initiated: integration (the action or process of successfully becoming a part of a system of thought), transgression (the action or process of fundamentally changing the system of thought by reformulating it), bypassing (the action or process of sidestepping the current system of thought and yet at the same time not discarding it altogether), or replacement (the action or process of gaining traction in the system of thought by discarding elements that do not fit with existing schema). In the first case, the sensory input is integrated into existing frames of thought in a satisfactory manner. In the second case, the sensory input serves to act in opposition to existing structures of thought, and may result in impasses and blockages. In the third case, the sensory input bypasses the existing frameworks of understanding, with the result that dislocations and divisions feature in the mind of the individual. In the fourth case, these sensory inputs replace those that have been implanted before. These four actions take place at each of the six stages of the apperception process. These are learning processes or actions.

At each of the six stages of the apperception process, an object, the perceptual object, is transformed in some way or another. We can then subsequently describe the transformational event (or series of events) as an object-relation working in the world, with these events being commonplace, temporally located, multivarious and frequent. If we are able to distinguish between different objects (and the justification for

doing this is complicated, but nevertheless essential to the argument being made in this book) and we want to build into our conception of the world ideas of change, inter- and intra-relationships and continuities (over time), then we need to understand what these are and how they occur. These object-relations act as change-mechanisms at the various stages of the apperception process: perceptual relations-in-action, neuronal relations-in-action, linguistic transformations, conceptual integrations, reflexive integrations, and praxes or contemplations. They also influence the type of change to the object that occurs at each stage.

Examples of these object-relations expressed dualistically are: one-to-one or one-to-many relations (where the relation between objects is manifested as an object-to-object relation or as an object-to-objects relation), strong or weak relations (where this refers to the probative force of the object-relation), vertical or horizontal relations (where this refers to whether hierarchies or flat structures of objects are being created), corrosive or developmental relations (where this refers to the consequences of the activation of the powers of an object on another object or objects – what type of change results), endogenous or exogenous relations (where this refers to the direction of change in the original object – internal or external), enabling or constraining functionality (where the direction and impulsion of the object-relation is towards one or the other), feed-back or feed-forward relations (where this refers to the temporality of the change process), convergence or divergence (where the endpoint is towards a monistic or pluralistic categorisation of knowledge), framing or reframing relations (where this refers to the epistemology of the change process), categorising or recategorising relations (where the concern is with the essence or non-essence of objects in the world) and subsumptive or contiguous relations (where this refers to the impact of the interaction on both objects, whether the impact is integral or peripheral). Each of these examples of object-relations is expressed in terms of its potentiality to influence object-arrangements at a particular point in time. This is the important point. It is not just that objects have tendencies to influence other objects, it is that they have tendencies to influence them in particular and specific ways.

Embodied knowledge, on the other hand, is a type of knowledge, in contrast to propositional, skill-based or dispositional knowledge, where the body of the person is the primary medium for action, for example, kicking a football in the right way. A person can have a good understanding of what it might mean to kick a football, knows how to kick a football, is dispositionally inclined to kick a football in the correct way, but is still not a good footballer. The reason for this is that this form

of embodied knowledge requires the body, and not the mind, to be the knowing subject, even if that person has acquired the relevant propositional, skill-based and dispositional knowledge about playing football. Ways of going about the activity of kicking a football are embodied, so that the footballer knows how to act in a given situation.

This therefore involves an act of doing something, which does not involve representation. There is no need for representation, because, as a learnt activity, there is a pre-reflexive process of mediation between world and body, and between body and world. In contrast, in propositional, skill-based and dispositional forms of acquiring knowledge, as I suggested above, the sensory input that is relevant to these types of knowledge apperceptively goes through a number of phases: world-to-mind (perceptual relations), initial sensory formation as a thought (neuronal relations), thought-through-language (linguistic transformation), language-into-thought (conceptual integration), thought-on-thought (reflexive integration), and manifestation of the thought in action (praxis) or reflection (contemplation). With regards to embodied knowledge, the process of acquisition is different: world-to-mind (perceptual relations), initial sensory formation as an embodied complex (neuronal relations), embodiment-on-embodiment (bodily integration), body–mind and mind–body amalgamation (mind and body integration), and manifestation of this embodiment in action (praxis or performance).

Distinguishing between knowing-that (a propositional form of knowledge) and knowing-how (a skill-based form of knowledge) has been a philosophical staple since the beginning of philosophy. Knowing-how can be used to refer to a kind of skill or ability, such as carpeting a room, or word-processing or mending a clock. This kind of knowledge does not require us to be able to give an adequate account of what we are doing. It also does not seem to have many reflective and reflexive characteristics. Its focus is on particular actions (room-carpeting, writing on a computer and clock-repair, for example), which are usually thought of as practical forms of knowledge – they allow us to go on in life.

This form of knowledge, then, has a different trajectory through the learning or acquisition process than propositional, dispositional or embodied forms of knowledge. The typical apperception process comprises perceptual transformations, neuronal transformations, linguistic transformations, conceptual transformations, reflexive transformations, praxes and acts of contemplation. With skill-based knowledge, the process is similar but with less of an emphasis on linguistic and conceptual transformations, and more of an emphasis on thought-to-action processes, with these actions understood as particular and specific

to the object concerned. As a consequence, the boundary between knowing-that and knowing-how is weaker than that between the other forms of knowledge. These tendencies are relational, as is the conceptualisation process – the way we learn concepts.

Dispositions

Dispositional learning takes a different form from sense-datum learning in the apperception process, although it shares many of its features, such as educative, temporal and object-relational elements. Dispositions have causal powers, even if these powers are not always realised. They are also concepts. This means that a concept is being understood as an ability or capability, and in opposition to the idea of concepts as being representational images in the mind. According to the abilities view, it is wrong to maintain that concepts are particulars in the mind; rather, concepts are abilities that are distinctive to sentient human beings. This has implications for how we learn concepts, with some philosophers (such as Fodor, 1975; 1998; Fodor and Lepore, 2007) maintaining that we do not learn concepts; what we do is reconstruct these concepts from previously held concepts that are in some sense innate.[48]

The consequence for arguing this case is that if concepts and conceptual frames cannot be learnt, then the only way through this dilemma is to embrace a belief in innateness, with all the problems that this creates. Indeed, on some accounts, this would mean that there is no such thing as learning, an almost impossible idea to hold on to. If we want to revivify learning as a coherent concept and viable practice, we have to show how the various ideas and connections between these ideas are misconceived, for example, that hypothesis-testing[49] is not the only way that concepts can be learnt, or that concepts are not exclusively abstract entities in the mind. A way out of this dilemma is to suggest that concepts are acquired by people having experiences in the world. However, this cannot solve the problem, since any experiences that we may have are filtered through an organisational and transformational framework of some type or another, and this in turn requires the person

[48] Innate theories of learning suffer from confused ideas about genetic determinacy and different potentialities.

[49] Hypothesis-testing is a form of learning in which the learner develops an idea of how something in the world works and then proceeds to do something in the world with the express intention of confirming, disconfirming or partly confirming the original idea.

to already have access to those meanings and conceptual framings that this organisational schema possesses, and, once again, this requires a pre-developmental understanding of the concept, which is prior to the act of learning. We are being forced back to Fodor's conclusion that concepts are innate.

An alternative way of thinking about this is to understand the idea of concept acquisition as driven by rules or principles, rather than by the person acquiring new conceptual elements. This means that the person acquiring a new concept works out for themselves the logical outcomes of applying these rules in the world. This requires a capacity to already know, and be able to use, rule-bound and logical processes (which may or may not be innate, but which certainly pre-exist what we are calling perceptual acts of learning). This cannot, however, solve the problem that we have already alluded to, since it could be argued that the substantive concept under consideration is implicit within the rules that are being followed to acquire the new concept. The problem is the same with each of these arguments: that in order to acquire a new concept, a person has to be able to identify instances of that new concept, and this requires some prior understanding of that concept (its history, its genealogy, its use, its relationship with other concepts) to do this. Consequently, the weak case is that conceptual development is always prior to the act of learning a new concept, and the stronger case is that this acquisition is innate. I want to suggest that this is a mistaken viewpoint (certainly for the stronger case and quite possibly for the weaker case), and it is mistaken because concepts and concept-acquisition are dispositional in character and should be understood as abilities or capabilities.

A variety of concepts are used in the field of learning, such as: literacy, numeracy, meta-cognition, emotional intelligence, self-regulation, growth, progression and intelligence, and these are embedded in our three networks or constellations of meaning: antecedent, coextensive and pragmatic. I have also suggested that it is possible to identify different types of concepts, if we understand a concept-type in relation to how a concept can be and is used in a way of life. Some of these are: generalisations, abstractions, symbols in the mind, acquired dispositions, object categorisations, valued configurations, algorithmic formations and semantic conditionals.[50] There are three principal uses

[50] These different views about what a concept is can be encapsulated in the three principal views of concepts and conceptual developments discussed here.

of the term: concepts as representations in the mind, concepts as abstract objects and concepts as abilities.

The first of these maintains that concepts are psychological entities, and this view is underpinned by a representationalist theory of mind, with this view of the mind–world relationship able to accommodate a notion of correspondence, reflection, sameness or manifestation. There is something in the world, outside the structures of a mind, which can lead to an equivalent operation in that mind, and these operations can be thought of as beliefs, desires, concepts and the like. These are psychological states, and they are sometimes divided into primitive or basic concepts and concepts that are dependent on them. Under this viewpoint, concepts are taken to be foundational or basic, and thought – now understood as irremediably conceptual – is grounded in these images in the mind. Fodor (1975) called this the *language of thought* hypothesis. This representational view of concepts is the default position in cognitive science. This is Fodor's view of what a concept is, and this has implications for how it can be learnt or acquired, if at all.

The first problem with the argument that concepts of both types (primitive and complex) cannot be learnt by testing hypotheses – that there are no other ways by which a concept can be learnt, and therefore that concepts cannot be learnt – is that hypothesis-testing is not the only way we learn concepts. We also learn concepts through processes such as observing, reflecting, meta-cognising, and problem-solving. Many of these learning modes do not allow us to fall into the trap set, during his lifetime, by Jerry Fodor, and, consequently, if we adopt a different view of what a concept is, such as that concepts are abilities, then other forms of learning can be thought of as legitimate. Hypothesis-testing implies that on every occasion in which hypotheses are formulated by the learner, they always contain elements of preformulated concepts. Concepts as dispositional acquisitions, I am suggesting in contrast, can be learnt ab initio, although subsequent forms of propositional, process and embodied forms of learning may require prior acquisition of specific dispositions.

The second problem is that reflection and reflective processes would, under Fodor's cognitivist account, lose any sense of serious thought about, or consideration of, a concept. Now, this perhaps is not a necessary element of a theory of learning,[51] but it creates a considerable problem if learning is understood as a conversation between the inner

[51] A learning theory such as behaviourism deliberately eschews such processes.

and the outer, as involving a capacity to operate outside of embodied, socially derived or genetic causal impulses, as accepting that reasons can be conceived as causes of human behaviour, and as incorporating some or other notion of intentionality as a central element in any theory of the relationship between mind and world.

The second view of a concept is that concepts are abstract objects. Under this conceptualisation, concepts are the meanings of words and word-complexes, as opposed to objects and states of mind. Concepts as meanings mediate between thought, language and their referents. This entails a sense–reference distinction – thoughts are not psychological states, but rather they are the meanings of states of mind. A difficulty with the idea of concepts as abstract objects is that they stand, or seem to stand, outside the causal process; that is, they cannot be accessed in the normal way that we access objects in the world. And furthermore, if we were to treat concepts as purely abstract entities, it is unclear how concepts could be learnt.

The third view of learning is that concepts are abilities, and this is the predominant way that concepts have been and will be understood in this book. This does not mean that some concepts cannot be understood and conceptualised as abstract objects; however, what this suggests is that primitive or basic concepts, such as learning, are neither representative images in the mind nor words and word-complexes in a language of thought. And this, in effect, renders Fodor's diminution and abandonment of learning as being inadequately conceptualised on two counts: first, concepts are understood in too narrow a way, so that learning inevitably becomes a peripheral activity; and, second, there is a variety of learning modes that allow learning of concepts as abilities.

In this chapter, I have developed an apperceptive framing of the relationships between world and mind and mind(s) and world. The sensory input in the apperception process goes through a number of phases: world-to-mind (perceptual relations), initial sensory formation as a thought (neuronal relations), thought-through-language (linguistic transformation), language-into-thought (conceptual integration), thought-on-thought (reflexive integration), and manifestation of the thought in action (praxis) or reflection (contemplation). What this means is that if we accept the idea that there is a conceptual dimension to this process and this framing of the world (and I have set out the argument for that in this chapter) every world-to-mind and mind-to-world activity (and, in a person's lifetime, there are many of these) is conceptually based. In the next chapter, I examine a curricular form of knowledge and learning. I do so by looking at a particular example of

knowledge development, that of powerful knowledge, a valorised idea that is meant to show that there is a certain type of knowledge that is central to a school curriculum, whereas other types cannot and should not be a central part of a curriculum. Powerful knowledge, then, is a discursive configuration that, as we will see, reifies the social fact and fact(ing) process, and which in its use refuses to engage with the wider socio-economic and cultural influences in curriculum design, including what is actually taught (and not taught) within each subject discipline. It is also a subject- or discipline-based epistemic theory, in which epistemic boundaries (or insulations) exist between the subject areas and the types of knowledge they comprise, and these boundaries, perceived as non-arbitrary, have to be maintained.

4
A *Bildungstheorie*

The central tenets of the powerful knowledge discourse (for example, Young, 2005; 2018)[52] can be summarised in the following way. Curriculum knowledge is more important and takes precedence over other aspects of school experience, such as socialisation in a general sense, and creative, expressive and interpersonal skill developments in a particular sense. Some types of knowledge, for Young, are intrinsically, rather than contingently, more important than others. This knowledge should be transmitted and acquired through the school curriculum, within a range of traditional subject areas, each of which is characterised not just by subject content but also by a particular distinctive, subject-bound, form of knowledge. Epistemic boundaries (or insulations) exist between the subject areas and the types of knowledge they comprise, and these boundaries, perceived as non-arbitrary, have to be maintained. This subject-specific curriculum must be taught by well-educated experts in their field, properly resourced, and, although not fundamentally changing,[53] continuously updated in light of new knowledge as it emerges in the world at large. It is only in this way that the full breadth of knowledge, and subsequent access to truth, can be maintained. The nature of this curriculum knowledge, and not just the purposes to which it might be put, is qualitatively different from the knowledge that is acquired by learners outside the school setting at home and in local communities. Out-of-school knowledge has no place in formal education, even as a basis on which to build new knowledge.

[52] See also Young and Muller (2007; 2010; 2015).
[53] The type of knowledge that Young and Muller (2007; 2010; 2015) subscribe to is foundational and preformed in essence, in that it is there in the world, waiting to be discovered.

This is because the purpose of formal education is to provide learners with knowledge that they cannot, or at any rate do not, access outside formal education, and not to celebrate learners' out-of-school experience (Young, 2005).

A curriculum that not only prioritises collaborative learning between students but also cuts across traditional subject boundaries returns us to the apparent discomfort of the powerful knowledge discourse with cross-curricular teaching and learning. In its fixation on the distribution of important or powerful knowledge locked inside discrete school subjects, it not only denies the possibility and effectiveness of interdisciplinary and transdisciplinary knowledge, but it does so without any convincing justification or explanation as to why alternative curriculum models (for example, topic- and issues-based curricula) might not function equally effectively or even more so.[54] This second set of knowledge disaggregations into knowledge types or kinds, as with the proposed distinction between everyday and theoretical knowledge, looks for support not so much to research evidence as to already existing theory, or at least, in Young's case, to a Durkheimian/Bernsteinian[55] social realism,[56] with its many flaws and misconceptions.

The powerful knowledge discourse reifies the social fact and constitutes a fact(ing) obsession, which in its use refuses to engage with the wider socio-economic and cultural influences in curriculum design, including what is actually taught (and not taught) within each subject discipline. This includes how power relations in the macro socio-economic system influence and are reflected and repeated in power relations in the micro system of the school curriculum and examination syllabuses. This disinclination to engage with the issue is worrying, principally because it focuses on the nature and impact of the 'social

[54] Robin Fogarty (1991) identifies ten models of curriculum integration, ranging from strongly classified and strongly framed curricula, as in the traditional approach, to weakly classified and weakly framed networked approaches to curriculum planning. Between the two extremes – traditional or fragmented and networked approaches – she identifies eight other points on the continuum: connected, nested, sequenced, shared, webbed, threaded, integrated and immersed.

[55] For Bernstein, who had a great deal to say about the nature and importance of pedagogic relationships (for example, Bernstein, 2000: 3–86), the boundaries he references (by way, he says, of 'metaphor') between, for example, school and the wider world, between specialist knowledge and curriculum knowledge, and between subject disciplines, are flexible spaces in which negotiations, disagreements and conversations can take place.

[56] It might seem strange to link Basil Bernstein and Émile Durkheim together; however, both of them reject the idea of transcendental knowledge, settling for an attenuated discipline-based view of knowledge. In Durkheim's (1939) case, this amounts to a social fact theorem and a fact(ing) pedagogy, and in Bernstein's case, it leads to a transmissive knowledge pedagogy, from discipline to school subject to learner, and a structuralist deterministic ontology. Much more needs to be said about this regressive and divisive form of knowledge that Young seems to be so wedded to.

fact' itself in isolation from its relationships with, and beginnings in, the social world in which it is produced, and because of its too-easy appropriation within conservative policy and thinking. As a result, it has become so popularised within the fields of curriculum and learning that it threatens to draw attention away from other important issues, including, I would suggest, ongoing social injustices within wider systems, and the role of schools and school curricula in enabling and supporting them. It continually underplays the role of pedagogy in public education, tending to treat pedagogy and curriculum as two separate but connected social facts, rather than as two facets of a whole. It also ignores the important context of student experience, not only in terms of working with prior or out-of-school knowledge and experience to build new knowledge and promote higher order concept development, but in relation to students' differing perceptions of themselves as learners, and to their deeply held views about what they believe they are capable of achieving academically, and what future prospects might be available to them in the workplace. In this way, alongside a largely unproblematised reification and instrumentalisation of knowledge (over more complex, transdisciplinary, cognitive, dispositional and creative learning), the powerful knowledge discourse appears to invite us to imagine idealised learners, neutrally differentiated by social background but simultaneously universalised through equality of access, embracing, in the manner of other popularised initiatives based in narratives of equity and inclusion, the idea that there is no difference of note between, on the one hand, making something available to someone and, on the other, their possessing either the ability or the desire to accept it.

Michael Young's (2018) notion of powerful knowledge is grounded in an assumption that there are two distinct types of knowledge, one of which is evidence-based,[57] abstract and theoretical, part of a system of thought, dynamic and reliable (and, as a result, testable and open to challenge), outside the direct experience of the teacher and the learner, and discipline-based (at least in domains that are not arbitrary); and the other, which is concrete, practical, can be successfully identified, and is generally focused on how to do something or other. Those human beings who are denied access to this first type of knowledge (that is, powerful knowledge) are in some sense disadvantaged, and consequently are likely to have restricted life chances. If we want to sustain this argument,

[57] In the next chapter, I discuss the issue of what evidence is and what it is not.

then we have to show that acquiring this knowledge is better in some specific way than not acquiring it.

This chapter, then, examines in turn a number of dichotomous framings: scientific knowledge/practical knowledge, curriculum knowledge/everyday knowledge, epistemic activity/going-on-in-life activity, academic/vocational knowledge, knowing that/knowing how binaries, and the framing of knowledge that is central to the work of this book, cognitive/procedural/embodied/dispositional, and others. Each of these dichotomies are reflections of difference and of how we structure (in a discursive sense) the realm of knowledge, and, as I argued in Chapter 3, the realm of learning as well. The first of these dichotomies is the scientific knowledge/practical knowledge divide.

Scientific knowledge/practical knowledge

This is to contrast scientific knowledge with practical knowledge, that is, to identify the constituents of each and the relations between them, and then to show how they are different or the same. For example, it has been suggested that scientific knowledge is nomological[58] (where the knowledge claim can be couched in a language of rules and invariant happenings), whereas everyday or practical knowledge is idiographic (where the focus is on the meaning of contingent, unique and perhaps subjective phenomena). Another way of framing this argument is contrasting abstract knowledge with concrete knowledge (that is, knowledge of particulars); an abstraction being understood as a minded construct in which new ideas are formed if a number of these ideas are analysed together, and those features that distinguish them are then omitted. If we consider a range of so-called blue objects, we can take or abstract from them their different qualia, and thereby come to a notion of blueness. The object itself is initially conceptualised in its concrete form.

[58] An inductive-nomological approach consists of three processes (Harré, 2011): accumulation, induction and instance confirmation. A deductive-nomological approach comprises the collection of empirical data to confirm, disconfirm or partially confirm an original hypothesis or hypotheses. The retroductive approach or procedure can be understood at the levels of strategy and method as a series of steps or action-sets (see Bhaskar, 2010): reasoning, analysis, redescription, retroduction, elimination, explanation, correcting, readjusting. The abductive reasoning strategy is a form of logical inference, which consists of a move from an observed phenomenon to a theory that can account for that observation. In abductive reasoning, the premises do not guarantee the conclusion. These four strategies are all nomological in kind, in that they seek to identify laws or make propositional rule-bound claims about knowledge, which persist over time and/or place, whereas practical knowledge makes no such claims, or so the argument goes.

The claim is then made that practical forms of knowledge do not engage with these processes of abstraction.

A third way of framing the argument is by invoking a notion of generalisation. Its defining property is that the knowledge claim being made can accommodate more than one instance of a concrete event. There are two problems here. The first of these is the difficulty of identifying, and in the process coming to understand, the boundaries of the object, a concrete event or happening in the world. The second is, how do we reconcile this identification of the object with it being manifested in a number of ways. For example, in order for the object to be manifested quantitatively – that is, that there are a number of instances of it – there has to be some measure of generality already present in the object itself. This, then, is the generalisation principle: the words, concepts and ideas that are used can embrace a large number of instances or manifestations. In contrast to this principle and purpose, the intention may not be to accommodate a large number of the object's manifestations, but to give a detailed account of a mechanism and how it might work in the world. In both cases, knowledge of the object is not isomorphic with the object itself. They are different because the one signifies knowledge of some object and the other is the referent, and thus refers to the object itself.

Another attempt at distinguishing between the two forms of knowledge is that scientific knowledge is knowledge that is not tainted by values, interests, preconceptions and the like, whereas practical knowledge is valued, normative and valorised. Generally, knowledge is said to be objective when it is not influenced by personal values and emotions, while subjectivity refers to knowledge that is based on personal opinions, feelings and interpretations. However, as I have suggested elsewhere (see Scott and Scott, 2018), the concept of objectivity (as it is used in the world) contains multiple rather than singular meanings. It is possible to give six different meanings to objectivity, namely, ontological objectivity (something can exist with or without it being perceived by human beings), alethic objectivity (if something meets a set of truth conditions, it is objective), positional objectivity (something is objective when the relevant knowers' traces, such as values and interests, are excluded), extrinsic objectivity (something is objective if it can be directly accessed through observation), method objectivity (something is objective if its mode of application to the world is correct), and warranted objectivity (something is objective when more than one knower agrees on its truthfulness). The distinction between value-free and valued knowledge cannot be

directly read into the distinction being made here between scientific and practical forms of knowledge.

A further justification for scientific knowledge is that it is produced in specialised places or locations for the production of knowledge (in most cases, the disciplines). The opposing view is that those places are logically required to be either interdisciplinary and/or transdisciplinary. The case for interdisciplinarity starts from the premise that, outside a few experimentally (and even fewer naturally occurring) closed contexts, a multiplicity of causes, mechanisms and, potentially, theories is always involved in the explanation of any event or concrete phenomenon. However, to get from multi-mechanismicity to interdisciplinarity, and thence to transdisciplinarity, we have to add considerations of emergence and temporality to those of complexity (Bhaskar, 2010). If, in addition to an emergent level, a qualitatively new or emergent outcome is involved in any and every causal relationship, then the knowledge required can no longer be generated by the additive pooling of the knowledges of the various disciplines concerned, but requires a whole integration, or genuine transdisciplinarity.[59]

A number of suggestions have been made above, which would allow us to distinguish between scientific and practical knowledge: normativity, abstraction, generalisation, nomothetic extension and disciplinarity. Each of them in turn has been shown to be problematic, although they do point to some differences between the two types of knowledge. And one of these refers to the pedagogical element in knowledge and knowledge development, with the argument being made that scientific and practical forms of knowledge have different types of pedagogical elements.

Knowledge is transformed at the pedagogic site, so it is possible to suggest that qualities such as the simulation of the learning object, the representational mode of the object, its degree and type of amplification, control in the pedagogic relationship, progression or its relations with other learning objects, the type of pedagogic text, relations with other people in the learning process, the organisation of time (temporal relations) and types of feedback mechanism are fundamental components of this pedagogic transformation. What this means is that in the learning process, the learning object takes a new form as a result of changes to these properties: simulation, representation, amplification, control, integration, textual form, relations with other people, time and

[59] See Scott (2021).

feedback. The sheer complexity of the possible pedagogic knowledge forms that this allows means that relations between pedagogic arrangements and social arrangements, and between these pedagogic arrangements and notions of identity formation and social positioning, can only be tentatively sketched out.[60]

In the preceding part of the argument, I have pointed to those necessary constituents of scientific or theoretical knowledge, in order to show whether or not there are differences between this form of knowledge and everyday practical knowledge. To sustain the argument that I am making in this chapter, I now need to describe the components or elements of practical knowledge – knowledge that allows us to go on in life. An example of this is repair work (a form of practical knowledge), so that if we are riding a bicycle and the bicycle breaks down, we stop. In order to repair the bicycle, explanatory knowledge, and not just knowledge of how to ride the bike, is needed. However, in order to effect that repair, we do not need to understand the physics of stability given that there is enough forward velocity, the two parameters of stability (the lean angle and the steering angle) that describe the orientation of a bicycle as it travels in a forward direction, the role played by gyroscopic effects, leaning orientations to compensate for the effects of centripetal acceleration, and the degree of force that propels the bike forward and especially when going up a hill. What we, in fact, do is look at the various parts: chain, gears, handlebars, saddle, riding capacities and the like, and compare them with a norm that seemed to operate when the bicycle was functioning properly, and then we try to adjust the one so that it looks more like the other. And no doubt we also use methods of trial and error, always bearing in mind that we have a template in our heads about a functioning bicycle. This is a very different process from starting from first principles (scientific knowledge), then working out from these principles that the concrete application of them in the form of a damaged bicycle does not conform to them in some specified way, translating these deficiencies in the theoretical model into concrete actions of repair, and then effecting the repair. In fact we do not need first-principle knowledge to diagnose and effect the repair; in some cases it may be positively harmful, as in training to be and performing as a teacher, where too much theory may actually impede in various ways both learning to be and performing as a teacher.

[60] Basil Bernstein (2000; 2002) tried to do this, but he was only partially successful.

However, it has been argued that theoretical knowledge is necessary because it can act as a repair to breakdowns in practical knowledge. Theoretical or first-principle knowledge allows us to replenish the store of practical knowledge that we hold. The issue, then, is whether practical knowledge is always in this symbiotic relationship with theoretical knowledge, so that practical knowledge grows, even tacitly, in line with theoretical knowledge, or whether practical knowledge grows and becomes more sophisticated in response to experience, practice and learning (the pedagogical element). The question consequently becomes: can we separate out theoretical and practical forms of knowledge, and ascribe to them separate developmental pathways?

A second criticism is that all practical knowledge emanates and has emanated from theoretical knowledge. Much of our technical, going-on-in-the-practice, sometimes but not always tacit, knowledge was once what could be called theoretical knowledge. This suggests that theoretical knowledge precedes practical knowledge in every case. However, most practical knowledge, it can be safely assumed, never goes through processes of abstracting, generalising or nomothetic extension (that is, first-principle knowledge). Much practical knowledge, whether tacit or otherwise, is learnt in the practice itself, through trial and error, or imitation or through other means, and, therefore, as I have suggested, always has attached to it a specific pedagogical formation.

Furthermore, it is now possible to accept that theoretical knowledge for solving a problem in the practical realm has been developed but cannot be used because the practical technologies for incorporating theoretical knowledge into practical knowledge are not yet available. An example of this is celestial navigation continuing to be used long after at least two necessary theoretical components had been developed: the notion of a spherical Earth and the development of spherical trigonometry. What was missing were productive technologies and mechanisms for allowing the theoretical developments specified above to be realised in the practical domain.

Another example of a difference between theoretical and practical knowledge refers to computers. We can work a computer and word-process without having to learn a programming language or, indeed, how that programming language allows us to word-process. And yet, the development of that programming language at a theoretical level (abstracting, nomologising or generalising) has allowed the learning of practical steps for its use. Indeed, the theoretical practice is ongoing and continues to influence the practical operation of the system. However,

much theoretical knowledge has no practical implications, although we can never be sure of this, even as we project ourselves into the future.

Practical knowledge, or knowledge of how to go on in life, I am suggesting, is different from theoretical or scientific knowledge, although there are elements that both have in common. The central question then becomes: do these differences allow us to determine (in a deontological, aretaic or consequentialist way) that one of these types of knowledge, and specifically scientific or theoretical knowledge, can be shown to be of greater worth than the other, insofar as acquiring it is better in some specific way than not acquiring it? What it is possible to suggest is that those differentiating principles (normativity, abstraction, generalisation, nomothetic extension, disciplinarity and formal pedagogisation), if translated into forms of knowledge held by significant numbers of people, can contribute to a better way of living.

What I have also been suggesting is that if we are to understand what a curriculum is and could be, then we also have to understand how knowledge is and can be construed. This has involved the making of a claim (a claiming) that knowledge and knowledge development have certain constituents, and consequently are this rather than that. This therefore constitutes a rejection of certain viewpoints about scientific or theoretical knowledge; for example, disciplinarity on its own, propositionality in its traditional form, and inferentialism exclusively (the conceptual contents of a knowledge claim are not only inferential in formation). What I am also suggesting is that knowledge development has a pedagogical content, which it applies to acts of knowledge development both inside and outside of formal and specialised educational institutions, and that the difference between first-principle and practical-everyday forms of knowledge is not that the one has pedagogical elements and the other does not, but that the elements of pedagogical knowledge are constituted in different ways in the two forms.

Curriculum knowledge

The next step in the argument is to show how knowledge and learning relate to the school curriculum in a formal sense. This means that a reason (or reasons) for designating knowledge as the central dimension of the curriculum has to be provided. Two reason-giving arguments can be invoked to support this proposition. The first is to conceptualise learning as an epistemic activity, and the second is to suggest that those curriculum ideologies which marginalise knowledge are deficient or

inadequate. We can then determine what this knowledge-producing activity is, and distinguish it from those curriculum ideologies which purport to prioritise knowledge but rarely achieve their aim. The issue of how knowledge is transformed at the pedagogic and evaluative sites, and the relationship between these two sites, is also of importance.

A curriculum, which is a set of teaching and learning prescriptions, is in essence a knowledge-forming activity. However, this cannot resolve the issue of what should be included in that curriculum and what should be excluded from it. The next step in the argument, then, is to determine what might constitute a legitimate form of knowledge and thus, by implication, an illegitimate form. Three epistemic frameworks – foundationalism, instrumentalism and pragmatism – have been suggested as curriculum rationales. In addition, a variety of social epistemologies have been identified – social constructivism, social realism, epistemic realism, inferentialism and critical realism – and although parts of these theories are understood as useful for the task in hand, I am suggesting that on their own they do not amount to a complete theory of knowledge, and therefore of learning. However, elements of each of the epistemic frameworks set out above (foundationalism, instrumentalism and pragmatism) can contribute to a coherent and comprehensive theory of curriculum and provide a reason, or set of reasons, as to why a curriculum should include some items and not others, and what shape and form it should take.

Axiomatically, then, a school curriculum is always a selection from a range of cognitions, skills or dispositions that are available within a society; that is, these are being, or have been, manifested in human practices of a discursive, institutional, agential or embodied kind. Choices also have to be made as to how a curriculum is constructed: what relations are considered to be appropriate between the contents of the curriculum, its pedagogic forms, its learning strategies, and its evaluative criteria and apparatus. These choices of cognitions, skills, embodiments and dispositions, then, if they are appropriate, require a justification or rationale for them as curricular contents. This justification can take an epistemic form: a curriculum is in essence a framework for some type of learning or another; learning, whether cognitive, skill-based, embodied or dispositional, is understood as a knowledge-development activity; and therefore knowledge is central to the construction and realisation of the curriculum.

An accepted, but not uncontested, view of learning is to theorise it as a process, with a range of characteristics. It has a set of pedagogic relations, in that it incorporates a relationship between a learner and a

catalyst, such as a person, a text, an object in nature, a particular array of resources, an artefact, an allocation of a role or function to a person, or a sensory object. A change process is required, either internal to the learner or external to the community of which this learner is a member. In any learning episode, there are temporal and spatial arrangements, and these can be understood in two ways: first, that learning is internally structured, and, second, that learning episodes are externally located in time and place. Learning is conditioned by arrangements of embodied, discursive, institutional or agential resources, and this has implications for the types of learning that can take place. Each learning episode has socio-historical roots. What is learnt in the first place is formed in society and outside the individual. It is shaped by the life that the person is leading. Learning, then, has an internalisation element, where what is formally external to the learner is interiorised by the learner, and a performative element, where what is formally internal to the learner is exteriorised by the learner in the world. These elements of learning, if and as they are realised, constitute a knowledge-forming activity.

Knowledge is therefore central to the four types of learning I identified in Chapter 3: cognitive, procedural, embodied and dispositional. Cognitive learning comprises the manipulation of those symbolic resources (words, numbers, pictures and the like), which points to (although not necessarily in a mirroring or isomorphic sense) something outside itself, although the referent might also be construed as internally related. Skill-based knowledge is different from cognition because it is procedural and not declarative. Distinguishing between knowledge of how to do something and knowledge of something is important, but both are in essence knowledge-making activities. Embodied knowledge has as its primary reference point bodily functions and activities. Dispositional knowledge refers to relatively stable habits of mind and body, sensitivities to occasion and participation repertoires. These four types of knowledge have different forms in their original states and, as a result, they have different pedagogical structures, and different expressive or performative modes, and they can only be assessed functionally in relation to their different internal relations; that is, there have to be different ways of assessing or evaluating them.

Any knowledge-forming activity, whether cognitive, skill-based, embodied or dispositional, needs a reason or set of reasons as to why the production of this form of knowledge should be preferred to the production of other possible forms. A counterargument to this is to suggest that knowledge is intrinsically worthwhile, and therefore does not require a justification or even a procedure for selection. And this

then provides a means for determining the contents of a curriculum. The argument is that if someone chooses to dispute or deny the claim that the pursuit of knowledge is intrinsically worthwhile, then it follows that they are being inconsistent, because in asking this question, they are already committed to its pursuit, and thus have already answered the question. This argument is flawed in so far as asking the particular question about the pursuit of knowledge in a general sense does not commit one to the pursuit of all types of knowledge per se; and, furthermore, does not provide a justification for deciding that some types of knowledge are more worthwhile than other types of knowledge. Thus, even if the first part of the argument is accepted, there are no grounds within the argument presented here for determining what that knowledge should be. And although this, in principle, is an argument in favour of knowledge, it is not an argument which can determine what should be included in, and consequently excluded from, a curriculum.

In order to provide a rationale or justification for these inclusions and exclusions, it is important to determine what that knowledge is and how it can be constituted. This activity involves the acceptance of certain types of knowledge, and the subsequent rejection of others. For example, knowledge which is understood as being determinate (there is a singular truth, which can be known), rational (there are no contradictory explanations), impersonal (the more objective and the less subjective the better), verifiable (the meaning of statements about human behaviours and their origins are understood in terms of observational or experimental data) and predictive (explanations of human behaviours are knowledge claims formulated as generalisations from which predictions can be made, and events and phenomena controlled) is fundamentally different from knowledge which is retroductively produced and referenced to a social world which is stratified, open and has ontological depth (see Bhaskar, 2010, and Chapter 5 of this book), and thus a belief in both of these is difficult to sustain. Another example refers to the nature of knowledge, and, in particular, whether it is individual or social. A traditional epistemology understands the conditions for justified belief in individualist terms, rather than placing them within social contexts. This can be contrasted with social epistemologies (see Vygotsky, 1987), which prioritise the social over the individual.

Knowledge (whether we are referring here to its essence, its legitimacy or its genealogy) is contested, and consequently requires choices to be made between these different formulations, conceptions and arrangements. This in turn has implications for the types of pedagogy that can be employed and the types of evaluative procedures that should

be adopted. This is predicated on an assumption that learning per se is always about learning something which we might want to call knowledge; binding knowledge and learning closely together, then, is an acknowledgement that knowledge can be declarative, procedural, embodied or dispositional, and that in its production it can be construed as a learning activity.

A common argument which purportedly allows us to distinguish between legitimate and illegitimate items in a curriculum is foundationalist in orientation. Foundationalist views of epistemology were developed in response to radical sceptical beliefs about the possibility of having true knowledge of the world; indeed, the argument the sceptic made was that such knowledge is fundamentally impossible. If we choose to subscribe to a relativist and radically sceptical epistemology, and thus accept that our descriptions of reality are relative to particular and specific time- and space-bound sets of ideas in the world, and if we further accept that it is not possible to make theory- or schema-free observational statements, then reality itself cannot influence how we acquire knowledge of it. What this means is that there may be a number of different ways of knowing the world, and no means of distinguishing between them. Foundationalists think otherwise.

Classical or demonstrative conceptions of foundationalism maintain that any justification for the truth of an educational proposition rests on identifying those basic principles which underpin subsequent statements about the issue and, more importantly, those inferences that allow us to move from premise to conclusion. These basic principles or beliefs have to be self-evident, which means that they do not require any further justification. Epistemic foundationalism has two forms. The first of these is structural, and this is where beliefs are said to be basic when there is no need for further evidence to justify them, or those beliefs are inferentially connected to basic or self-evident beliefs which do not require any further justification. The second form of epistemic foundationalism is substantive foundationalism. This has all the characteristics of structural foundationalism, and, in addition, is epistemically basic, because such beliefs are intrinsically credible or self-evidencing. What this means is that it plays the end role in any chain of justification, and there is nowhere else to go if such a justification is sought. These beliefs, then, if they can be identified, are sufficient for framing the contents and processes that constitute a curriculum.

A number of foundationalist justifications for the inclusion of items and processes in a curriculum have been developed. The first of these we might want to designate as broadly philosophical, and this is where

logical delineations between domains of knowledge can be identified. Each of these domains has distinctive kinds of concepts, and distinctive ways of determining truth from falsehood. A second justification for including items in a curriculum, and for excluding others, is broadly psychological: individual learners have cognitive or minded capacities which are separate and act separately from other minded capacities. Furthermore, individuals have been shown to differ in their capacity to perform these different types of operations. A third set of justifications moves us out of the mind and focuses on the culture we inhabit. All functioning societies have similar sets of knowledge delineations, where these delineations refer to activities in societies, and, therefore, because they are universal, the argument is that they should be represented in the curriculum. A fourth type of curriculum justification locates the curriculum in natural processes of progression. A child, unless they are restricted in some way, will naturally grow as a conscious being, and this is not dependent on the way society is structured or arranged. The epistemological claims made for each type of justification imply an essentialist view of knowledge and its divisions, and a neglect of the transitivity inherent in the development of knowledge within the disciplines.

A different type of justification for the inclusion of items in a curriculum rejects foundationalist justifications, and suggests that any justification for the contents of a curriculum has to rest with some conception of what we are trying to achieve in the delivery of that curriculum. As a result, children in formal education, having been through a process of successful exposure to this curriculum, are acquainted with certain cognitive and propositional types of knowledge, have developed certain designated skills, are able to perform in certain embodied ways and have acquired certain designated dispositions, which, it is argued, allow them to lead a fulfilled life, and which also allow everyone else within that society to lead a fulfilled life. This justification is clearly normative and instrumental. What this implies is that a set of experiences can be identified to which a child is exposed, and that these lead inexorably to the development of knowledge constructs, skills, embodiments and dispositions which can be utilised by the individual outside of (in time and place) the learning environment. There are two principal problems with this approach: it is difficult to identify and reach agreement about what the good life for all is, or at least a life for all which allows everyone to be contented; and there is an equal difficulty with identifying experiences for children in school which will lead to the development of knowledge constructs, skills,

embodiments and dispositions which allow the individual to lead a fulfilled life when they leave school.

A variety of instrumentalist curriculum rationales have been developed, such as autonomous instrumentalism, critical instrumentalism and economic instrumentalism. Instrumentalism denotes a view of the curriculum that makes reference to a future state of affairs for the learner which is external to the setting in which the learning is taking place. Autonomous instrumentalism refers to a view of the curriculum in which pedagogic arrangements, knowledge or skill orientations, knowledge framing, relations between knowledge domains, progression and pacing in the learning environment, relations between the teacher and learner, relations between types of learners, spatial and temporal arrangements and criteria for evaluation are determined by the principle that the end product is an autonomous individual, or at least an individual who is able to exercise their autonomy, even if they choose not to or are prevented from doing so. Critical instrumentalism, in contrast, as a rationale for a curriculum and its internal relations, seeks to eliminate from society sources of inequality and unfairness. The purpose is therefore indubitably normative. Economic forms of instrumentalism prioritise the economic over other functions in society.

These different versions of instrumentalism, although rooted in different value systems and educational rationales, have a similar form. There are three stages in their formation. A preferred vision of society and the conditions for the existence of such a society are identified. The role and purposes of the education system, and the contents and form that a curriculum should take to realise these ends, are clarified, and, finally, after the most effective means for the delivery of those ends have been identified, they are enacted, resulting in changes to existing curricular forms, and subsequently to changes in society.

A pragmatic[61] justification, then, is that a rationale for including an item in a curriculum and excluding another rests on the consequences of it becoming a part of that curriculum, and on how that curriculum plays out in practice; so, a judgement is made between two different items on the grounds that one is more likely to be useful than the other. We should note the way that an epistemic judgement (in the traditional sense, and where this refers to a true or false proposition) is

[61] There are various forms of pragmatism, and it is the philosophical one that is of most concern to me. I use the notion of pragmatism in this book to indicate or point to the third constellation of meaning that is a central part of the argument I am making in this book.

being replaced by a pragmatic judgement about efficacy, although in this case a different type of truth theory is being invoked. As a result, it is possible to argue that an item should be included in the curriculum because it is more practically adequate, that is, human practices within which it is subsumed work in a better way as a result of its inclusion. The issue still remains as to what might constitute successful work, or, to put it another way, what criteria can be used to judge whether the practical adequacy of one practice is superior to another. This can only be resolved by arguing that one theory contributes to a better way of life than the other, and that this better way of life is determined by preferences of people in society and instantiated through current networks of power. The problem with this is that those sets of indicators which determine whether a theory is practically adequate may not be accepted by those who hold a different and rival theory, and this therefore cannot form a basis for distinguishing between different theories except insofar as this is decided on the basis of asymmetrical power arrangements within society. Even here, it is not possible to say with any certainty that one of these is more practically adequate than another as a result of current arrangements in society, because what those arrangements signify might be disputed, and, in addition, they are likely to change over time. Pragmatists foreground the social in knowledge development, and it is therefore important to examine social theories of knowledge, while also avoiding some of the problems inherent in these epistemologies.

A number of social epistemologies have been developed: social constructivism, social realism, epistemic realism, inferentialism and critical realism, for example. The first of these is social constructivism. In opposition to a belief in a mind-independent reality, strong social constructivists avoid epistemic commitments, and locate justificationary rationales and apparatuses in specific discursive formations, which cannot be externally referenced. The argument being made here is that all truth claims emanate from agreements or disagreements between human beings in the present and stretching back in time, which can be and have been only resolved by the exercise of power in society. Consequently, gradations of knowledge, where one form is considered to be more true, more adequate or more reliable than another, are not accepted, nor are knowledge constructs which are legitimised by reference to metaphysics, rationality, logic, essentialism or even intuition. Knowledge is the result of struggles in the past about the means for distinguishing true from false statements, and in the sense that the contingencies of history resulted in one such mechanism enduring at the expense of its rivals, knowledge

comes into being. This social epistemology is generally challenged on the grounds that the issues surrounding epistemic relativism are not resolved in a satisfactory way.

A second framework is social realism. This is a philosophy developed in reaction to the excesses of social constructivism and, in particular, its irrealist assumptions. It parts company with social constructivism by its insistence that it is the social nature of knowledge (and this includes the way it is constructed, developed, given the status of theoretical knowledge and so on) which allows theorists to make the claim that knowledge is legitimate (see Young, 2005). As a result, although knowledge has a social basis, this does not mean that it is being reduced to vested interests, the activities of specific issue groups, or even relations of power. Even if one accepts that knowledge production is not tied inexorably to the furtherance of particular vested interests, including the furtherance of cognitive interests, this does not mean that there are no cognitive values which are independent of local power struggles, or that there are no cognitive values relative to particular places and times or specific discourse communities, or that there are no means for determining that a particular curriculum is better than another, or even that there is no infrastructure for the production of knowledge which transcends time and place. The sociality of knowledge, therefore, does not undermine its objectivity, but it is a necessary condition for that objectivity to be realised. Furthermore, if this view is correct, then knowledge processes such as differentiation, fragmentation, subsumption, progression and the like are key moments in its development and, consequently, key framing devices for understanding it and its legitimation.

However, what is central to this as a curriculum rationale is a belief that some knowledge is objective (and therefore should be included in the curriculum) in ways that transcend the historical conditions of its production. And this in turns means that it has to be possible to distinguish between those elements of knowledge which have been formed as a result of struggles within disciplines about legitimacy and form, and those which have not emerged in this way. This would seem to be impossible to achieve for practical reasons, and even then, other curriculum rationales would need to be invoked, such as instrumentalist, epistemic or pragmatic justifications.

A third position, epistemic realism, is qualitatively different. As Hilary Putnam (1990) suggested, our conceptual frameworks, perspectives on the world and descriptive languages interpenetrate what we are calling reality to such an extent that it is impossible to conceive of a

pre-schematised world. However, this has a number of consequences and difficulties for an exclusively representational view of knowledge; for example, the curriculum cannot be a simple representation (expressed as a series of facts) of what is out there in the world, because the world is not entirely separate from those mediating devices that human beings have developed to make sense of it, and this therefore means that in order to develop a curriculum rationale, we have to take account of those activities which we might want to call epistemic-to-ontic (that is, knowledge of the world to being in the world) and ontic-to-epistemic (that is, being in the world to knowledge of it) transactions. This has certain implications. The first of these is that a correspondence between a static intransitive world and an unchanging epistemic world misrepresents the nature of both, and the relationship between them. Second, any attempt at describing the world always has the potentiality to change it, although not in every circumstance. Third, regardless of the accuracy or authenticity of the original set of descriptors, and as a result of this epistemic-to-ontic activity, those descriptors may become more accurate or more authentic. Although this suggests a one-way relationship, this is misleading. Those conceptual framings and sets of descriptors are informed, constrained and enabled in a non-trivial way by the world or reality at the particular moment in time in which they are being used, and in turn the shape and form of the ontological realm is influenced by the types of knowledge that are developed.

Representational epistemologies in some of their manifestations construe knowledge as a collection of social facts. Some social facts are facts by virtue of an agreement by people to act as though they exist, for example, fixed and differential intelligences[62] or dyslexia; in this case, that agreement is forged in the present, and deliberately so. Social facts are facts by virtue of an agreement which has evolved over time, are likely to have been created within disciplines or practices of knowledge making, and users may have forgotten that they were constructed, created or invented in the past, so deeply embedded into the collective psyche have they become. As we saw in Chapter 3, Robert Brandom (2000) argued against a representational mode of knowledge, so that knowledge which is considered to be legitimate can be said to be discourse-specific, and prioritising of parts of that discourse: a particular speech act and an associated language game. The speech act is that of asserting, and the language game which he privileges is the giving and asking for reasons.

[62] See Scott and Leaton Gray (2024).

An inferentialist approach to knowledge development, and to understanding what knowledge is, also has implications for those processes of evaluation, assessment, attribution and normalisation which are central to any and every act of construction in a curriculum.

A final theory of knowledge, and therefore of learning, and one which understands it as the principal activity of consciousness, is provided by the philosophy of critical realism. Critical realists make three claims: there are significant differences between the transitive realm of knowing and the intransitive realm of being; the social world is an open system; and reality has ontological depth. The first of these is that a distinction is made between the intransitive world of being and the transitive world of knowing, with the consequence that if they are conflated, either upwards, resulting in the epistemic fallacy, or downwards, resulting in the ontic fallacy, some meaning is lost (see Bhaskar, 2010). This suggests that the transitive and intransitive realms may become disconnected. The second claim made by critical realists is that the social world is an open system, in which objects have emergent properties. Closed systems are characterised by two conditions: objects operate in consistent ways, and they do not change their essential nature. Neither of these conditions operates in open systems.

The third claim is that social reality has ontological depth. Social objects are the real manifestations of the idealised types used in discourses. They are structured in different ways, and because of this, they possess powers. The powers that these structures exert can be manifested in three ways: they can be possessed, exercised or actualised. Powers that are possessed are powers that objects have whether they are triggered by the circumstances or not, and they may not be directly observable. Powers that are exercised have been triggered and are having an effect in an open system, and, as a result, they are interacting with other powers of other structures. These powers may still not be directly observable, as other powers of other structures may be acting against them. Powers that have been actualised are generating their effects, so that within the open system they are working together with other powers, but in this case, they have not been suppressed or counteracted. Embodied, institutional or discursive structures can be possessed and not exercised or actualised, possessed and exercised, or possessed and actualised.

As a result, a causal model based on constant conjunctions is rejected and replaced by a generative-productive one, and objects and relations between objects have emergent properties. Knowledge development is not understood in essentialist or metaphysical terms,

whether this refers to subjectivity, agency, mind, structures or even the social, nor is the theory of mind which underpins it. However, critical realism is an indirect realist theory,[63] and it therefore employs processes of modelling and retroduction to provide accounts of knowledge-development practices and the relations between them over time. I now need to develop a theory of curriculum that takes account of all the issues that I have just discussed.

A *Bildungstheorie*

The easy part of the exercise is describing or giving a credible account of knowledge production and curriculum formation with regards to the concept and practice of learning. The difficult part is making a judgement about what those forms of knowledge might be in a curriculum and what they cannot be. This can be expressed in the form of a question: what are those dispositions (for example, being intelligent, being courageous, being moderate in judgement, being liberal, being generous, being ambitious, being patient, being friendly, being truthful, being humorous, being modest and being judicial),[64] cognitions (for example, having and being able to use stores of propositional knowledge developed by other people in the important areas of life, such as astronomy, biochemistry, biophysics, biology, chemistry, genetics, geology, zoology, history, geography, sociology, psychology and so on), processes and procedures (for example, making a table out of wood, repair work, making an inferential judgement, vacuum-cleaning a house, word-processing, changing a light bulb and much else) and embodiments (for example, sexuality or sexual preference, physicality and motility) that we think are appropriate for inclusion in a curriculum. This is not a directory of pedagogic knowledge, because the object to be learnt has logical and other types of inferential connections and relations with the way it can be learnt, and thus its pedagogy is derived from the constitution of the learning object, its learning modus operandi, and the characteristics of the learning environment. It also involves a series of rational choices and, consequently, the giving of reasons for those choices. In short, this

[63] This view of critical realism, that it is an indirect form of realism, is disputed by writers such as Margaret Archer (2007), who argue in uncompromising terms for a direct form of realism. The real originators of the philosophy of critical realism are not Archer or even Roy Bhaskar, but Roy Sellars (1917) and Wilfred Sellars (1997).
[64] See Aristotle (1963; 2018a; 2018b).

Bildungstheorie[65] is future oriented, semantically conceived, fundamentally values- and virtues-based, ethically and compassionately driven (at curriculum, pedagogic and learning levels) and lifelong, and it fulfils Martha Nussbaum's (2000a) requirement for a philosophy of equal esteem for all human beings – the equality principle (see Chapter 10). The key relations in this *Bildungstheorie* are: maturation (reaching a state of full or complete development), progression (as a simple supersession, a sequencing supersession or a hierarchical supersession – see Chapter 1), narration (we structure our sense of reality through a narrative or set of narratives), possibility (discursive and material objects and object-configurations that are sourced from the original object), projection (for Heidegger [1962], existence, being what it is, always confronts us with the issue of which possibilities we should project into the future, and thus into our future self or selves),[66] praxis (comprising a thought as in some way becoming an action), edification (the ethical, social, political or epistemic improvement of a person), justification (the development of a set of good reasons for doing something in the world) and teleology (from τέλος,[67] telos, end, aim, goal or finality). A *Bildung* is both a concept and a discursive configuration comprising material and discursive objects, object-relations, discursive and material configurations, as well as being a praxical object and having a material existence in the world. As a discursive object, the concept of *Bildung* has several properties, such as being polysemic, semantically contested, networked, interactive, powerful and dynamic.

In its curricular form, we might want to construe a *Bildung* in the following way. There are 12 areas of life: epistemics (knowing), modalities (communicating), temporalities (genealogising), spatialities (positioning), physicalist sciences (cognising), hermeneutics (understanding), technologies (enhancing), meditations (philosophising), ethics (being), valorisations (valuing), corporalities (embodying) and creativities (being creative), and these are the building blocks of any curriculum that we might want to construct. A *Bildung* is a discursive configurational object, and it refers to a set of values that each person should develop in themselves. Originally understood as a process of formation, it has taken on other meanings, such as an ethical and cultural

[65] Two German words are used in this chapter, *Bildungstheorie* and *Bildung*, and these are not used to obscure the meanings that I am seeking to explicate, but to show or indicate the origins of these words and word-sets, given that there is a lack of obvious words or word-sets in the English language that can capture the meanings that inhere in these two words.
[66] See also Heidegger (1977; 2012).
[67] From the original Greek word.

self-realisation. It is tied closely to social and political arrangements, and consequently it stipulates certain types of belief and behaviour for each person. It is, and has always been, a learning process. To make a *Bildung* possible, each person has to constitute themselves holistically, and this comprises a balance between sensibility and reason.

Bildung was a central concept in the normative thought of many late eighteenth- and early nineteenth-century German thinkers associated with romanticism and idealism.[68] However, it never developed into a specific school of thought, but became part of the conversation about generative and apt learning and learning arrangements. *Bildung* can mean ethical formation, development, education or culture; it has roots both in ancient Greek notions of culture or *paideia* and in Christian understandings of human creation and re-formation. In its early formation and conception, *Bildung* was understood primarily as a process of development. Later, it came to be understood as a cultural acquisition, concerning taste, sensibility and good living, with its inevitable class associations, and as a form of cultural capital. Another strand of thinking in relation to a *Bildungstheorie* was aesthetic. Immanuel Kant's (2000) notion of aesthetic judgement comprised a configuration of understanding, imagination and pleasure. If we are ever to achieve a *Bildung* in this sense, then we have to become genuinely moral beings: balanced, rational, sensible and affective. Romantic *Bildung* was a political ideal as much as it was an ethical or dispositional one. It also had connections and relations with the naturalisation of knowledge.

There was a family of views in the late eighteenth century that understood the natural as an inner source of motivation and action. It is possible to place these under the collective term of expressive romanticism, although we should be careful about placing all its many iterations under one single banner or label. In contrast to the classical emphasis on form, tradition and harmony, some romanticists argued for the expression of feeling and imagination in the construction of knowledge. There are two consequences of this. The first is affective in a fundamental sense, so that we can talk about the nurturing of an inner voice. The second is entering into a particular relation to nature, one of conservation, respect and care for it. In this sense, nature means more than just the environment; it also extends its meaning into what is considered natural. Thus, some sexual practices were considered to

[68] Such as Johann Gottlieb Fichte, Johann Wolfgang von Goethe, Johann Gottfried Herder, Georg Wilhelm Friedrich Hegel, Friedrich Ludwig Jahn, Friedrich Wilhelm Joseph Schelling, Friedrich Schleiermacher and Ludwig Uhland.

be abhorrent because they did not conform to what is natural or given. We can then talk about a naturalistic ethic in which our behaviours, intentions and thoughts are aligned with a natural norm. This is also a form of legitimation, in that human beings now had a clear way of distinguishing between those activities which are natural and those which are abnormal, and consequently those activities which they should own and those activities which they should disown.

A naturalist, above all else, rejects utterly any metaphysical or even universal sense, although universals may be understood as natural objects, as being justified by their natural status. On this account, there are no Platonic forms,[69] Cartesian mental substances,[70] Kantian noumena,[71] or divine objects that do not in a broad sense belong to nature. There is only the natural order of things. Although many scientists embrace naturalism, this does not mean that naturalists necessarily endorse notions of determinism, physicalism and reductionism. Indeed, we should be careful here to separate out those belief-sets which embrace these notions and a theory of mind that is in some sense volitional. And what follows from this is that there is an irreducible normativity, and hence ethical prescriptiveness, involved in the use of concepts and conceptual terms, such as *Bildung* and learning.

A *Bildungstheorie*, then, has as its central component a notion of learning, and this is learning understood as polysemic. Learning can be construed as a site of knowledge development, in that there are three sites of knowledge: the world and its contents, the mediating arena between the contents of the world and objects in the mind (this is what we might want to call learning sites, which are also contentful), and the contents of the mind that allow us to make judgements, perceive the world and reflect on what we have perceived. Learning can also be understood in a technical sense as the absorption of information, as a sponge absorbs water. It can be thought of in praxical terms, as an action or activity in the world. It can also be understood as an essential reference point in a *Bildung*, which is perhaps best construed in relational terms as a maturation, a progression, a narration, a series of possibilities, a projection, a praxis, an edification, a set of justifications and a telos.

Having examined, in this chapter, the nature of configurations or constellations of knowledge, some more credible than others, in the

[69] Plato was a philosopher born in Athens during the Classical Period in ancient Greece.
[70] René Descartes was a French philosopher, scientist and mathematician, widely considered a seminal figure in the emergence of modern philosophy and science.
[71] Immanuel Kant was a German Enlightenment philosopher, whose best known work was *Critique of Pure Reason* (Kant, 2007).

next chapter, I examine the important issue of how we can justify these knowledge-development activities, and what the implications of this might be for the theory of learning that is being proposed in this book. Justification is a concept in its own right, and therefore as a concept it has semantic, multisemic, semantically contested, networked, interactive, powerful, dynamic and meaning-making qualities. All concepts are normatively and ethically framed, and what this means is that every time we use a concept, discursively or as a praxis, we are giving a value to something in the world. However, some concepts are strongly framed as value-carriers, while others are only weakly framed. Some concepts have a supersessional form, and consequently are hierarchically arranged; others do not. In our judgements, or in the judgements we choose to make, if we want to understand the meaning of a concept such as justification (or justifying), we have to show how it relates to other concept-meanings and how relevant they are. These relations are object-specific, and they determine how objects interact and are constructed.

5
Justification criteria for knowledge and learning

We therefore need to position the epistemic dimension of social theory as first and foremost. Epistemology has traditionally allowed us to distinguish between different types of knowledge claims, specifically between legitimate and illegitimate ones. The development of the social sciences in the nineteenth century took place under the long shadow of the physical sciences, and, consequently, these disciplines or proto-disciplines sought to mirror the procedures and approaches adopted by the natural sciences. Such approaches can be characterised in the following way. There is a real world out there and a correct way of describing it. Theorising about that world is simpliciter a matter of following the right methods or procedures. What these are is clearly disputed and a matter of some concern, as we have seen in the response to the Covid-19 pandemic by various scientists of different persuasions round the world. However, the principal characteristic of scientific knowledge is that it aspires to the production of true knowledge because it works to criteria such as systematicity, objectivity and rigour. In addition, science accumulates knowledge, that is, it builds incrementally on previous knowledge.

These epistemic activities, however, comprise accounts of, or reasoned arguments to support, a claim about some aspect of the world. There are four ways of establishing the truth or otherwise of any propositional claim we might want to make about knowledge (epistemic, coherentist, rational and logical) and some form of combination of these is possible and necessary. Susan Haack (1993) has argued for a reconciliation between foundationalism and coherentism, with the understanding that foundationalism can be understood as having logical, rational and epistemic dimensions. Haack called her reconciliation of foundationalist and coherentist elements, foundherentism.

It is at this point in the argument that I need to retrace the steps that I have taken so far. Concepts, and this after all is the focal point of my investigation, cannot be fully determined as to their meaning in definitional and essentialising ways, but only in terms of how they are used in a way of life. I then suggested that a distinction could be made between knowledge of the world and meta-knowledge, which directly refers to knowledge of this world and not to the world itself, and, further to this, that all knowledge, including knowledge of learning and learning in itself, uses or is enframed in criteria, whether these criteria are implicit or explicit. I want to suggest that in addition to the use of criteria, any investigation into the meaning of a concept has a judgemental element: does this object that is being primed for investigation conform to the criteria that are appropriate to the making of a judgement of this type? An answer to this question then needs to incorporate some understanding about reasons (for making these sorts of judgements) and about whether reasons can qualify as evidence for this or that. If we are to include reasons in evidential justifications, then we also have to value or evaluate those reasons when we make a claim about knowledge.

The key set of relations that concerns us here is between evidence and assertion. What is the evidence for the claims that Andreas Schleicher (2015) made, with regards to the Programme for International Student Assessment (PISA): that children from similar social backgrounds can show very different performance levels, depending on the school they go to or the country they live in; that there is no relationship between the share of students with an immigrant background in a country and the overall performance of students in that country; that there is no relation between class size and learning outcomes within or across countries; that there is no incompatibility between the quality of learning and equity, since the highest performing education systems combine both; that all students are capable of achieving high standards; and that, more generally, top performing education systems tend to be more rigorous, with fewer curriculum items and with these being taught in greater depth? Here, Andreas Schleicher is suggesting that collecting a certain type of evidence from a survey of different countries round the world justifiably allows him to make a number of law-like assertions about educational processes that are past-, present- and future-oriented. These assertions also have a sense of correctness about them, and this comes from the evidence that is used to support them, and from the inferential relations that connect evidence and assertion.

There are different types of evidence, and there are different types of inferential relations between evidence and assertion. For example, legal

evidence comprises the rules and principles that govern proof of facts in a legal proceeding. A quantum of evidence refers to the amount which is needed, and the quality of proof refers to how such evidence should be treated in coming to a conclusion. These rules of legal evidence govern admissibility, hearsay, authentication, relevance, privilege, witness, opinion, expert testimony, identification and physicality matters. For each rule and each area of jurisdiction there is a designated inferential relationship between the type of evidence collected and the subsequent assertion or judgement that is made. In every sphere of life, there are different understandings of what evidence is and what the appropriate inferential relations are between evidence and assertion.

Evidence as a concept and a practice is polysemic, semantically contested, networked, interactive, powerful and dynamic. Evidence can be construed as the means of proving something in a legal sense, as the reason or reasons why we should do this rather than that, as to how we can suggest that certain events will happen in the future, as the justificatory principle for any assertion we make, as an indication that makes something evident, as the means by which we investigate matters of facts, as the way we establish or verify the truth or otherwise of a statement, assertion or proposition, and, indeed, in other ways as well. The inferential relations between evidence of whatever type and any assertion that we might want to make can be understood as: pluralising (where the relation between objects is manifested as an object-to-objects relation), relational force (where this refers to the strength of the object-relation), ordering (where this refers to hierarchies of objects being created), representing what is there in the world (where this refers to an attempt to connect or relate thoughts to objects), endogenous (or exogenous) (where this refers to the direction of change in the original object), framing and reframing (where these refer to the change process), categorising and re-categorising (where the concern is with differences between objects in the world), negating (where this refers to the dialectics of the change process), and in many other ways. In addition, evidence and assertion are embedded in particular and specific communities of practice.

Within the community of practice that I belong to, I make judgements all the time: judgements about the quality of a piece of work, what excellence in the practice might be, the reasonableness of accepting an application for promotion, the effectiveness of a teaching programme and so on. I also (as you do as well) make a series of judgements in every interactive exchange that I take part in, from the relatively trivial to the most profound. These are inferential judgements about evidence and

the conclusions that can be drawn from this process. In making these judgements, evidence and its use are central. Evidence can be more or less authentic, reliable and accurate, and, more importantly, more or less salient, where this is understood as a chain of reasoning involving evidence and inference leading to a conclusion about a set of activities, and involving judgements at every level. So, a piece of evidence may have a weak indirect relationship to the chain of reasoning, or a strong direct relationship to the chain of reasoning because it refers to the chain itself and not to evidential elements of it.

Furthermore, salience as a criterion for determining the suitability of a piece of evidence for supporting a judgement is practice-specific.[72] This refers to the kinds of information which serve as supporting facts in making a claim, and these, I am suggesting, are practice-dependent: what is a relevant fact is determined within a practice. Therefore, evidence may not be appropriate because it does not fit with the evidence base within which the claim is embedded, and which gives it some measure of credibility. And, further to this, each and every evidence-set also has within it a threshold for determining the required probative force of any claim that is made.

Evidence in relation to a judgement about the quality of learning, therefore, may be invalid for a number of reasons: domain incommensurability; non-conformity to the implicit and explicit rules of the domain; a lack of probative force to achieve credibility within the domain; a lack of fit with the way the domain is formed; the degree and type of fallibility accepted in the domain;[73] and the degree to which the evidence set provides a complete account of the activities being investigated. The content of that evidence, and the form it takes, differs between domains. And this in turn means that domain-specific judgements are illegitimate if and when they are applied in other domains, and in particular to domain-specific sets of evidence and inference, and this refers above all else to any claims that are intended to be generic or universal.

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[72] The notion of a practice is contested. MacIntyre (1981) argues that practices are cooperative, integral and have boundaries between them and other practices. They also have internal standards of excellence that make them what they are.

[73] There are a number of different types of fallibilism: (1) the individual believes that because they are positioned in relation to the external world, then their perspective is limited, and thus the knowledge they produce is compromised and incorrigible; (2) it is possible to make mistakes that, in theory, could be corrected; (3) the individual holds that no true knowledge is possible because there are no convincing arguments to refute the possibility of being radically deceived; and (4) knowledge is produced through processes of conjecture and refutation, but this can never attain to a perfect form of knowledge, since the changing and emergent nature of reality means that knowledge always lags behind its referent.

The discussion so far has focused on how we can and do make judgements in learning. I have already suggested here that these judgements and the way that they are made are underpinned by particular and specific epistemological and ontological criteria (see Chapter 1). The issue of whether it is possible, within the limits of language,[74] to develop lists of evaluative criteria, or even whether it is possible to judge between different accounts of knowledge, is therefore of immediate concern.

Internal, external and parasitic criteria

A fundamental distinction can be drawn between all the different criteria that we could suggest for making a judgement about a text (event, occurrence, written account, spoken account, epistemic process, reflection and the like),[75] and this relates to its internality or externality. Internality refers to the quality of the text, with the focus on validity, sufficiency of evidence, and sufficiency of process of evidence-gathering or systematicity, which in turn is validated by inter-subjective judgements within a particular discourse community, or by judgements made by individuals who subscribe to the values of a discourse community. However, whether subjectively or inter-subjectively validated, the focus is not on the impact it makes on that community or any other community, but on the quality of the text – internal criteria are epistemically focused. External criteria, on the other hand, refer to the impact of the assertion, so the remark is judged to be sound if it can be shown to have made an impact on an agent or agency in the world. A single external criterion may be deemed to be necessary, although not sufficient, for making a judgement about the quality of the text being examined, especially if a multi-criterial approach is adopted. The reason for distinguishing between these two types of criteria is that a piece of work can be internally sound but have made no impact, and, conversely, a piece of work can be internally flawed but may still have made an impact, either positively or negatively, on a discourse community.

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[74] This phrase, 'limits of language', is derived from Wittgenstein's *Tractatus* (1961: §5.6): 'The limits of my language mean the limits of my world.' It is intended to show that words, word-sets and language in general can never give us a full and perfect account of the world. There is always a gap between knowledge of the world and the world itself, and to believe otherwise is to adopt a mistaken view of what language is and can do.

[75] A text under this conception can be a life, an episode in a life, an experience in that life, a praxis, a book, a sign, a technology, a feeling or emotion, a framing and an enframing, and much more.

A text can be internally sound, that is, it represents the world adequately; however, it still may not be adequate at the level of external satisfaction. For example, it may not be useful, it may not have had any impact, and it may not have contributed to the development of the discourse community or to any capacity within it. It is internally sound in the sense that it is epistemically valid. The person who is making the judgement is switching their attention from the original account and focusing on a different problem: that of the impact of that account in different discourse communities, and this requires a different range and type of evidence to be collected to determine whether or not it is adequate. As I have suggested above, this still requires the use of epistemic criteria, although these are now being invoked to determine the adequacy of a different activity. There are a number of criteria that cannot be treated as criteria in their own right but that are parasitic, that is, their value relates to the values given to first-order criteria, such as epistemic validity or impact on a discourse community or communities. For example, a text can only be valued for its transparency if what is being made transparent is epistemically valid. If this is not epistemically valid, then the attribute of transparency has no value.

Another issue, then, that needs to be addressed is the probative force of a text, bearing in mind that a text can be understood as an event, an occurrence, a written account, a spoken account, an epistemic process, a reflexive act and the like. If I make a theoretical claim about learning, as I have done on many occasions in this trilogy of books,[76] I am also claiming that this theory is a better theory for explaining all the available evidence than all the other possible theories that have been developed, and the truth claim embedded here is such that any practitioner (or person) should act to modify her practice if it is relevant to that practice.[77] However, in many instances of judging, a person does not make the claim that they have an absolute view of truth, but rather they badge their findings as helpful guidance or lacking in contextual detail or as tentative, and therefore deliberately do not make the claim that it should be accepted as the complete truth about the matter in hand. This does not mean that the practitioner or person ignores the evidence and

[76] Scott (2021; 2024; and the present volume).

[77] Most research currently has attached to it an inadequate notion of truth, whether the author explicitly states this or not. This amounts to an assertion that because that author has collected, collated and analysed data (of whatever type) and drawn the appropriate conclusions, then what he or she is presenting to the reader must be truthful. It is a mistaken assertion.

does what she feels was right all along, but it does mean that evidence and hypothesising are treated here as strictly non-determinative.

A criterial judgement is considered to be sound if it satisfies the requirements for that judgement to be made. For a text (for example, a reflection by me about a conversation I have just had with another person) to be judged to have met the requirements of being significant, for example, it must have conformed to a model of what significance means to the person making the judgement, and this comprises two processes: first, that the criterion is adequately defined, if it can be adequately defined at all, and, second, that this general definition is applied to the particularity of the text in a satisfactory way, so that this text, in part or in its entirety, is an adequate example of the criterion. A criterion, then, is a statement about the quality of a text or any future text, and implicit within it is a model of what constitutes sufficient evidence for a judgement to be made that it conforms to the criterion, and evidence refers here to the structure of the text, whether it shows to the user that the argument that is being made is significant and so forth. The reader or interpreter or, indeed, person[78] who is making the judgement that it is significant needs to have found good reasons or evidence as to why it meets those requirements. She may also have looked for evidence that the piece has not met the criterial requirements; in other words, she is looking for evidence or examples of places within the text that would indicate that the satisfiers for the criterion have not been met. If she finds a sufficient number of examples in which the author or utterer has not adopted a significant approach, then she is likely to judge that it has failed to meet these satisfiers. Thus, moments of positive affirmation and negative disconfirmation are implicit within the process.

Furthermore, two conditions have to be met. First, the relationships between these criteria have to be clarified. Are they, for instance, in a hierarchical relationship to each other? Do they have different values attached to them? If they do, are these implicit or explicit? And second, the application of criteria still requires an interpretive process to be undertaken by other people, in a formal or informal sense, and this involves the surfacing of background knowledge and the reaching of agreement between them. This reaching of agreement is fraught with difficulties, especially if the discourse community is fractured. In addition, criteria tend to be hidden or concealed.

[78] These are everyday actions that all of us undertake.

However, it is not a question of abandoning one set (for example, internal criteria) at the expense of another (for example, external criteria), but of deciding on the relative value of each. This is inherently problematic; first, because different types of texts may have different purposes, and therefore to give a low value to a text which is designed to have no practical or instrumental purpose would be to discriminate against it. The second reason is that a further justification, which is an addition to the individual justification for each criterion, has to be provided, and this refers to why one criterion should be given a higher or lower value than another, and this applies even if all the designated criteria are given equal values. In the process of identifying these criteria, an implicit value is given to each, and this value is relative to values that could be given to other criteria within the set, and, in turn, these relative valuations need to be justified. When we make a judgement of whatever type, we need a meta-theory (an enframing – see Chapter 1) that provides a rationale for the values given to the different criteria.

Knowledge in judgement is still tacit, even if at various points in time that tacit knowledge is surfaced for reflection and contemplation, and amended accordingly. We have a model of what a good text looks like when we make a judgement, and, in part, we match up the text under scrutiny with this model.[79] There may, however, be a further process at work, which is that because we are aware that there are a number of different and conflicting ways of making a judgement about a text (referring here to observations, evaluations, thoughts, discursive and material objects, relational objects, configurational objects of various types, and persons), we suspend our own set of beliefs and judge the work to be sound if it conforms to the collective judgement of the discourse community in which we work, as we understand it. What we can say here with some confidence, however, is that evidence-providing or reason-giving activity has a judgemental element.

In making a judgement about a text (an object-in-the-world) using a set of criteria, the issue of fallibilism is salient, both as it relates to the judgement made by another person and as it relates to the use of evidence by us to support our hypotheses. This is because in making a judgement, true knowledge (that x is better than y, where x and y refer to different pieces of work) may consist of an acceptance that a weak form of evidence to support the hypothesis that is being made and/or a weak relationship between evidence and hypothesis is all that is required.

[79] This applies to every utterance we make in the world.

In this case, knowledge is fallible; however, it may still be acceptable, either to the reader or user of the text or to the discourse community in which they work. Thus, when a judgement is made that a text is relevant, plausible, transparent or whatever, no assumption is being made that it is perfectly plausible, transparent or relevant. It is accepted that it meets some but not all the requirements of these criteria.

There is a further dimension that needs to be considered, and this refers to the nature of the evidence itself and, in particular, to the way it has been gathered; in other words, its implicit (usually) warrant. If evidence is contaminated by vested interests, then it may be considered to be unsound. However, at a foundational level, there may be disagreement about the possibility or otherwise of any evidence being produced that is not imbued with interest values of one type or another. If, for example, a Gadamerian perspective is adopted, then the soundness of the evidence is judged by whether a sufficient acknowledgement of the background to the collection and presentation of the data is made (Gadamer, 1989), and this is underpinned by the idea that there can be no value-free evidence that can be collected. (See Chapter 11 for a more detailed account of this.) This, however, is treated not as sufficient for designating a piece of evidence as sound or unsound, but only as a necessary element of such a process. This Gadamerian perspective is informed by a number of positions that Gadamer took on the key dimensions of evidence and evidential practices. He suggested, for example, that knowledge cannot be objective in a positivist sense, but must include a subjective and knowledge-constituting element. Understanding something is always prejudiced in the sense that it is a process of requiring an initial projection that anticipates meaning and which shapes the process. This initial projection or pre-understanding is part of the person's situatedness – their location and standpoint in history, society and culture.

Foundherentism

If we want to argue that it is possible to know something, then we have to provide good reasons as to why a sceptical position is untenable. A sceptical view about knowledge can be understood as a knower having a fundamental doubt about a particular instance of knowledge or a doubting or questioning attitude towards knowledge in general. An extreme version of this scepticism is that there are no reasonable grounds for holding any knowledge beliefs (empirical or a priori truths),

and consequently we are not able to decide between competing ethical or epistemological accounts of states of affairs in the world. An epistemic sceptic, and in particular an ethical relativist, is unable to give their assent to the proposition that men and women should be equally treated and equally respected. Richard Rorty (1998) adopted a position such as this, with the consequence that all matters of justification, for him, were simpliciter cultural and political.[80] This means that processes of knowledge (knowing) and justification (justifying) play out in environments and settings that have acquiring and maintaining power as their central functionings. A true-knowledge approach implies that there is an important connection or relation between knowing and justifying, in that we cannot subsequently know something without it also being true in some sense or another.

I am concerned here with justified or true knowledge. Susan Haack's account of this is called foundherentism. The argument that Haack (1993) makes in her book *Evidence and Inquiry: Towards reconstruction in epistemology* is set out in the introduction and first chapter. Haack has written about other matters than epistemology, such as legal knowledge and philosophical pragmatism, but we are concerned here with only one part of her work, her attempt to reinstate epistemology (against moves by such people as Richard Rorty [1979] and Michel Foucault [1969] to relativise the notion),[81] and consequently her attempt to develop an objective way of deciding between or making a judgement about different versions of the world – a theory of epistemic justification.[82]

What she is essentially doing is producing a new account of epistemology, which avoids the difficulties that both foundationalism and coherentism have, and replacing it with a theory that combines the various forms of foundationalism that have been identified (logical foundationalism, epistemic foundationalism, atomic foundationalism,

[80] Richard Rorty (1998) gives us an account of epistemology which in the end amounts to the delegitimising of all absolute knowledge claims. For him, most modern epistemologists attempt to legitimate their claims to knowing something or other by arguing that they represent the real, or what is taken to be the real. Rorty's picture of the world is sceptical in a fundamental way, in that doubts, for him, can be raised about any and every empirical claim, including experiential and reflective ones.

[81] See also Foucault (1961; 1963; 1966; 1969; 1976; 1978; 1979; 1980; 1986; 1997; 2010).

[82] Haack (1993: 1) writes as follows: 'The problems of the epistemological tradition, I shall be arguing, are legitimate; formidably difficult, but not in principle insoluble. So, the problems I shall be tackling are familiar enough; most centrally: what counts as good strong supportive evidence for a belief? (the "project of explication" of criteria of evidence or justification, as I shall call it); and: what is the connection between a belief's being well-supported by good evidence, and the likelihood that it is true? (the "project of ratification").'

non-inferential foundationalism and the like) with coherentist theories, such as the conceptual theory that we are advocating in this book. She wants to include in her theory of foundherentism an argument that knowledge both allows for mutual support among beliefs and takes account of individual and collective experience, and is thus neither purely a priori nor purely empirical in character. It is a fusing of these two concepts.

Haack (1993: 14) defines foundationalism in relation to two essential precepts. The first of these is that some justified beliefs are foundational, in that no other beliefs can be adduced to justify them or support them. They are metaphysical or transcendental in orientation. The second precept is that there is a set of other beliefs which can be justified via their support for these basic or foundational beliefs. For her, this is a minimal claim, and is intended to distinguish it from the claims made by other foundationalists, such as that knowledge is certainly true (see Descartes, 1988), incorrigible (see Russell with Whitehead, 1925–7), dispositional (Wittgenstein, 1953) or infallible in the sense that it cannot be falsely held (papal infallibility is an example). In addition, Haack (1993) wants to include as possibilities for foundational knowledge three variants where a basic belief is justified but not because it is supported by any other belief. These are: an experientialist version, in that a basic belief is justified by the support of a person's sensory or introspective experience; an extrinsic version, where basic beliefs are justified because of a relation or connection between what that person believes and its truth-value; and an intrinsicality theory, where basic beliefs are justified in themselves. Haack also proposes that there can be different degrees of foundationalism in any set of beliefs, resulting in a range of variants: strong pure foundationalism, weak pure foundationalism, strong impure foundationalism, and weak impure foundationalism.

Advocates for classical conceptions of foundationalism argue that if we want to establish the truth of a proposition, we have to identify those basic principles that underpin the way we describe and use them, and the relevant inferences that allow the researcher to move from a set of premises to a conclusion. These basic principles or beliefs are not in need of any further forms of justification if we want to use them as foundational principles. This strong foundationalist view therefore comprises a process of identifying self-evident truths, and, consequently, if a foundational belief is to be thought of as credible, it requires no further justification and no further evidence to support it.

Haack (1993) compares this and its variants to a coherentist theory of justification, where a belief is justified by its fit with a constellation

of a coherent set of beliefs. She suggests that this set of beliefs is also thought of, or can be thought of, as requiring the element of consistency or being comprehensive or having an explanatory coherence. Each of these additions are crucial to how we might understand the concept of coherentism. In short, Haack wants to suggest that foundationalism and coherentism can be distinguished, because foundationalism requires one-directionality (the source of the truth of the matter emanates from these foundations), whereas coherentism requires justification to be exclusively a matter of relations among beliefs.

Haack's concern, however, is to reconcile foundationalism and coherentism, with this reconciliation resulting in what she refers to as foundherentism, a rather ugly neologism, but a stunningly appropriate one, especially when the theory being proposed is unitary and is attempting some sort of mediation between different and rival theories. An example of Haack's 'pervasive relations of mutual support' is the belief system that we are using throughout this book, which focuses on concepts and concept development. A concept, such as judgemental rationality, is both a material and a discursive object, and consequently it has all the characteristics that we associate with these types of objects. In the real world, boundaries are drawn between objects. As a discursive object, the concept of justifying has certain properties, such as being polysemic, semantically contested, networked, interactive, powerful and dynamic. The consequences of adopting a foundherentist set of beliefs are profound. However, we need to compare it, in the first place, with another set of justificatory relations.

Judgemental rationality

Roy Bhaskar (2011a; 2011b) developed a particular notion of judgemental rationality. This requires a unitary theory of knowledge, and it is a corrective to the many domain-specific forms of knowledge in existence.[83] And this suggests that at the extra-disciplinary level, knowledge is capable of being produced which allows us to make a judgement between different theories about the world; in other words, to allow us to say that this knowledge of objects in the world is superior to that knowledge of the same objects. Judgemental rationality consists of four elements or processes. The first of these is epistemic, where one

[83] In addition, Bhaskar developed a notion of immanent critique (Isaksen, 2017), although this creates some difficulties for his theory of judgemental rationality.

theory is better than another theory because the relationship between knowledge of the world and how the world is structured is better aligned. The second element or process is where a theory or description of the world is superior to another because within it there are fewer contradictions and logical anomalies.[84] A third approach focuses on the capacity of the theory or model to be more rational than its rivals. A fourth approach suggests that a theory is to be preferred to another because it is more practically apt or has stronger links to existing frameworks of meaning, that is, coherentism. These four processes, once they have been reconciled, allow us to make judgements about theories, models and descriptions of the world. In addition, this configurational process can act as criteria of judgement about the object of the investigation, such as concepts relating to learning, judgement and the like.

There are three problems with this conceptualisation of true knowledge. The first is that since we are dealing here with four processes, we have to address the issue of how they can be subsumed into one set of criteria which would allow us to determine that it is superior to any other statement or claim that we or another person might want to make. The second is that these criteria are of a different logical order, and this creates difficulties if we want to use them as justificatory principles, even if we are construing the notion of logic in a particular way. The third problem is that each of the processes is valorised, with these valuations and sense-making processes being differently formed in different social, geo-historical and discursive environments. Any theory of epistemic justification has to accommodate the valorisations and revalorisations that are a part of the world in which we live. Susan Haack's (1993) notion of foundherentism is a serious attempt at reconciling the different criteria of knowledge, although it is only partially successful in addressing the semantic dimension to our experiences in the world.

The issue, then, of what knowledge is, its justification, constitution and rationale, is of some importance in determining the meaning of our two meta-concepts: learning and knowledge. If knowledge is understood as disciplinary-based or domain-specific, then the mode of production and justification is located within a discipline (such as physics, sociology or linguistics) or domain of knowledge (that is,

[84] Bhaskar identified four possible reasons for the two elements being misaligned: there are social objects in the world, and these exist regardless of whether they are known or not; knowledge is fallible because any epistemic claim can be refuted; there are trans-phenomenalist truths which refer to the empirical world and discount deeper levels of social reality, that is, the work of social mechanisms; and, more importantly, there are counter-phenomenalist truths in which those deep structures may actually be in conflict with their appearances (see Scott, 2021).

region, language, register, index, realm or field of knowledge, such as in advertising, teaching, engineering, talking, writing, cooking and many more). If knowledge is understood as interdisciplinary or transdisciplinary, then its mode of production and justifying rationale is located in the spaces between different academic disciplines or knowledge domains, or outside those different academic disciplines or domains altogether. What this also means is that disciplinary knowledge, discipline-derived rationales for knowledge and discipline-based epistemic practices are in some important ways insufficient and inadequate.

If all sense-seeking and sense-making is through culturally and historically located interpretive frames, then knowledge of objects is perspective-bound and partial – it is relative to these frameworks.[85] Underlying this argument is a notion of a universal hermeneutics where understanding always involves interpretation, and where this interpretive activity is understood as universal. Interpretation is not, however, arbitrary but, as we have just noted, takes place through interpretive frames, which are themselves located in the background of all our beliefs and practices. Even apparently simple actions, such as arm-raising, can only be understood in terms of an immersion in, and inseparability from, a background, and they are therefore never fully specifiable. They are enframed.

Justifying, then, is a concept, and, more than this, it is a hinge or foundational concept, in that it has a particular significance in the scheme of things or objects. It is also key to any utterances that we make about the world, since without the capacity to justify any claims we might want to make (true knowledge), we are left in a state of either confusion or silence.[86] Judgemental rationality is therefore a key concept, a hinge mechanism. In the next chapter, I examine the nature of some other foundational concepts, such as averaging, probability, prediction, correlation and comparison, or at least they are treated as foundational and truthful by those thinkers who operate within empiricist and positivist frames (such as Ayer, 1936).

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[85] Gadamer argued that it is impossible to separate oneself as a researcher or person from the historical and cultural context that defines one's interpretive frame, since both the subject and the object of research are located in pre-understood worlds. Frames (or pre-understandings) constitute 'the initial directedness of our whole ability to experience … the conditions whereby we experience something – whereby what we encounter says something to us' (Gadamer, 1989: 173).

[86] Ludwig Wittgenstein (1961: i) suggested in the *Tractatus Logico-Philosophicus* that: 'Whereof one cannot speak, thereof one must be silent', although here he was referring to a certain type of knowledge (metaphysical, ethical, aesthetic and the like) and not to knowledge in general.

6

A mathematical language: averaging, probability, prediction, correlation and comparison

This chapter focuses on five key concepts – averaging, probability, prediction, correlation and comparison – which are used by scientific realists and statistical positivists, who generally subscribe to a Humean theory of causality[87] as spatiotemporal contiguity, succession and constant conjunction. This is founded on the idea that although it is not possible to observe a relationship between cause and effect, it is possible to identify a persistent association between two or more events, and then infer a causal relation. A repudiation of this view of causality is an essential building block for a notion of dispositional realism, or at least a view that objects have causal properties and thus dispositions of one type or another. Positivists and empiricists tend to use as their language of description mathematical symbols.

Mathematical operations, which include a notion of categorising, are logical in intent and form, or at least they are in one version of mathematics, logicism.[88] The three traditional laws of thought, lawful in that they pertain to the use of a mathematical language,[89] are the law of contradiction, the law of the excluded middle and the principle of identity. Using a mathematical language, the first of these can be expressed in the following way: $\sim(p \cdot \sim p)$, in which $\sim$ means 'not' and $\cdot$

[87] David Hume (2000) understood the practice of causation as a relationship between two impressions or ideas in the mind, indicating here a particular version of world-to-mind and mind-to-world relations. For Hume, causation is defined by experience, and, therefore any cause–effect relationship can be incorrect because thoughts are subjective. Hume was a sceptic about causality, but not about everything.

[88] See Frege (1980).

[89] The word 'language' is used here to indicate a mode of expression, and does not just refer to words and word-complexes.

means 'and'. This could be expressed in a word and word-complex language as follows: for all propositions, it is impossible that both the proposition and its antithesis are true at the same time. The second of these, again expressed in a mathematical language, is: $p \text{v} \sim p$, in which v means 'or' and ~ means 'not'. This can be translated into a word-vocabulary as: any proposition or its antithesis is true or false; however, there can be no middle proposition which can be positioned between them. The third of these principles, again expressed in a mathematical language, is that $(\text{A}x)\ (x = x)$, in which A means 'for every'; or simply that '*x* is *x*'. When translated into a word format, this can now be read as: a thing is always identical with itself. For our purposes here, it does not matter that these assertions may be correct or incorrect, or appropriate or inappropriate. What matters is whether the mathematical expressions given above are better than the linguistic ones or that the linguistic expressions are better than the mathematical ones; after all, both are using symbols of one type or another. Some might want to argue that the mathematical version is superior because it has the qualities of precision, accuracy, being monosemantic and comprehensiveness that the linguistic version does not have. In contrast, and because we are dealing here with concepts, others might want to argue that expressing these relations in a purely mathematical form leads to an impoverished and detheorised notion of reality, of what is. Again, I am not suggesting here that either of these two versions is crudely wrong or right, but only that there are different ways of picturing the world, and that these different ways (even if the one came out of the other) have different qualities and therefore different modalities.

Let us have a look at a mathematical expression for good teaching produced by Chris Husbands (2017): Q = C + E [Ks + Kt] + I, where quality (Q) depends on committed teachers (C), plus effective pedagogy (E), based on subject knowledge (Ks) plus knowledge of effective teaching (Kt), supplemented by imagination (I). The concepts that Husbands is placing in this algorithmic form are: quality, commitment, pedagogy, subject, knowledge, effectiveness and imagination. Each of these concepts is complicated in use, that is, their meaning and modality are complex, multisemic and contested. Effectiveness as a concept can only be understood in relation to a purpose or telos, and learning has many purposes or teloi. Commitment refers to the contents of what one is committing to, the referent determines the type of meaning that we can give to the term. For example, a subject-discipline can only be understood in relation to a curriculum, and this in turn can be conceptualised in a number of different ways: systemic-technological, critical-reconceptualist,

sociocultural or cognitive constructionist, phenomenological, epistemic foundationalist, conservative restorationist, autonomous instrumentalist, economist, postmodernist, and neoliberal, focusing on competences, and extra-national single surface comparative and assessment-driven implementation mechanisms. I could go on, but the point, I hope, is made. In order for this set of relationships to work (Q = C + E [Ks + Kt] + I) in a descriptive sense, that is, as a way of connecting a set of ideas to something that is happening in the world, there is a prior process of reducing and detheorising the building blocks of the theory. This underpins the algorithmic picture that is being painted of the world in this mathematical form. The question, then, is: is this a characteristic of using a mathematical language, or is it because the algorithm we are discussing is a poor example of this type of picture?

Another language that we can think about is musical, a language of sounds. Music is a modality, in that messages are transmitted from a maker (of the musical sounds) to a receiver (the listener). These messages are transmitted in a particular form, and what this means is that they require a particular type of receivership or reading or interpreting to make sense of them. We might want to call this a musical appreciation. Those messages have a certain form and intention, but they can only be understood by a receiver who already has knowledge of what the form means or is meant to convey. The messages are embedded in the discursive structures that people have learnt – the process is intertextual. However, in music, the contents of the message refer to emotions and feelings, rather than words conveying understandings. There is therefore a translation process at work as physical sounds connect with those feelings and emotions that the receiver experiences as a result of listening to the music.

An alternative language might be image-based. An image is different from a word. It is already in a significant form, in that it misses out one of the stages of the apperception process – the linguistic stage. As I suggested in Chapter 3, the sensory input in the apperception process goes through a number of stages: world-to-mind (perceptual relations), initial sensory formation as a thought (neuronal relations), thought-through-language (linguistic transformation), language-into-thought (conceptual integration), thought-on-thought (reflexive integration), and manifestation of the thought in action (praxis) or reflection (contemplation). At each stage of the apperception process, one of four actions are initiated: integration, transgression, bypassing or replacement. These four actions take place at each of the six stages of the apperception process. They are learning processes or actions.

Images have the characteristic of bypassing the linguistic or word stage. Image rendition is *vorstellen*-like (placing in front of, imagining). It also leads to a different relationship between world and thought, and subsequently between image and world, and it reminds us that there are different types of images which have different effects, such as technical images and imaginative images. Their fixedness is different. The five concepts that this chapter is concerned with, averaging, probability, comparison, prediction and correlation, form an important part of a language of mathematics.

Averaging

Averaging, probabilising, comparing, correlating and predicting are concepts that have important roles to play in understandings and practices of learning. As concepts, they have dynamic, plurisemic, contested and interactive sets of meanings attached to them. All of us in our everyday lives use a notion of averaging, the first of these concepts. Averages are employed to represent a large number of items by a single number. Averaging is a central value of a set of numbers. It can be used to mean someone who is not spectacular or not insignificant – a person who seems to be in the middle of a range of dispositions, constructs, skills and embodiments of a population.[90] It can also have the meaning of typicality, combining or showing the essential characteristics of a group or conforming to a type.[91] Most of the time, it is used to express the central or typical value in a data set, or typically the mean, which is understood as a division of the sum of the values in the set by their number. In the construct of learning, and in particular in relation to the learning process, the concept of an average, and thus an averaging in most circumstances, is used extensively, and sometimes misleadingly, in all the ways suggested above.

[90] Aristotle's (2018b) view of the virtues is encapsulated in the doctrine of the mean – it is an example of averaging. In any sphere of action or domain of feeling, for example, strength and health, there is both an excess and a deficiency: 'First, then, let us consider this, that it is the nature of things to be destroyed by defect and excess as we see in the case of strength and of health (for to gain light on things imperceptible we must use the evidence of sensible things); both excessive and defective exercise destroys the strength, and similarly drink or food which is above or below a certain amount destroys the health, while that which is proportionate both produces and increases and preserves it' (Aristotle, 2018b: loc. 33689).

[91] It has some affinities with Martin Heidegger's notion of *indifferenz* – the undistinguishedness of everydayness (Heidegger, 1962).

The mean, median and mode of a set of data respectively represent a calculation or interpretation of which value in the data set is the most common, most representative or most usual in the set as a whole. Averaging, then, always involves moving from a series of datapoints to a single datapoint, and this inevitably has a reductive element, with the consequence that some meaning is lost or distorted. (This distortion occurs whenever and wherever we understand data, or our basic unit of understanding, exclusively in numerical terms; however, averaging introduces another level of distortion.)[92] These reductions are frequently glossed over in accounts of learning, and other associated concepts. The mean (sometimes known as an average) is calculated by adding up all the numbers in a set and then dividing this aggregated number by how many data-objects there are, with the understanding that all of these data-objects have to be equivalents of each other and represent the same external object in the world. A median is calculated as the middle data-object if all those objects are arranged in an ascending or descending order. A mode is the data-object that occurs the most in the set. All these concepts, then, are valued or valorised in the world.

It is also possible to distinguish between these three averaging technologies – mean(ing), mode(ing) and median(ing) – as to their utility[93] (and this, of course, is restrictive in semantic terms). Average utilitarianism can be understood as the idea that we should seek in society that which maximises total learning. In exceptional circumstances, we might want to increase the average of total learning by instituting measures that decrease the sum of total learning. For example, we might decide to execute those people who have been designated as stupid or dull-witted, or we might want to put into effect a policy of eugenics, as Francis Galton[94] called it. In both cases, this

[92] I am using the word 'distortion' here to describe the epistemic gap between a description of the world and the world itself – although an averaging can provide some purchase on reality, it is always an inadequate one. These remarks should be tempered by the idea that averaging in itself and as a concept may have an ontological value.

[93] Utilitarianism is a mode of normative ethics. There are many varieties; however, it is generally held to mean that the morally right action is the one that produces the most good. Utilitarianism is a theory of consequentialism: the right action is entirely understood in terms of the consequences that result from it, whereas egoism, for example, is related to the desires and wants of the individual.

[94] Francis Galton, an English mathematician and Charles Darwin's cousin, decided that natural selection does not work in human societies in the same way that it does in nature, because people interfere with the process. As a result, the fittest do not always survive. So, he set out to consciously 'improve the race'. He coined the word eugenics to describe efforts at 'race betterment'. It comes from an ancient Greek word, meaning 'good in birth' or 'noble in heredity'. In 1904, Galton defined eugenics as 'the science of improving stock, which is by no means confined to questions of judicious mating, but which … takes cognizance of all influences that tend in however remote a degree to give the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable than they otherwise would have had' (Galton, 1904: 15).

would have the effect of increasing the average (of a more learned population), and at the same time decreasing the total population – the average would be an average of a smaller population. This would have ethical consequences with regards to both its means of delivery and its overall purpose or telos. The general point is that whether we work with averages or total populations, this has implications for how we can conceptualise the world and act within it. Average utilitarianism, then, as an ethical and epistemic doctrine has a number of problematic features: it requires quantification, and therefore equivalence, between those data-objects which are being measured; it deals with conceptual generalities rather than singular instances (of learning and the like); it is in itself an atomistic representationalist doctrine, with all the problems that this doctrine has; and it inevitably breaches the principle of equal esteem for all human beings.[95]

This notion of the average, so beloved by hereditarians and the like, is in the first instance identified with the mean, as we are using and understanding this term. Median utilitarianism on the other hand is understood as a practice in which our intention is to maximise the median learning of a population. What this means is that we should choose the distribution or arrangement of people which has the most amount of learning in the middle. This formulation has many of the same problems that mean(ing) utilitarianism has: non-equivalence of data-objects, generality and thus semantic reduction of a concept distribution in a population, and a breaching of the principle of equal esteem. However, although we are now less concerned with the problems of quantification than we were with the mean of learning (conceptually, of course), we are still required to order our population to both identify the median and to compare one median position with another. We do not have to follow the principle of precision demanded by mean-average utilitarians, but we still have to make a judgement of one type or another, and this judgement inevitably involves a quantification of the concept. However, here the problems associated with quantification are greatly reduced. There are also, with a form of the average, problems to do with distributions of goods for certain sectors of the population at the expense of others, and this inevitably means that the problem is both semantic and ethical. Finally, as with mean and median utilitarianism, mode utilitarianism has the same conceptual problems and the same conceptualising issues that are common to all the different forms of averaging

[95] See Nussbaum (2000a; 2000b; 2001; 2011) for a fuller explication of this important concept.

utilitarianism, and these cannot be solved by adopting any of the three versions. The next concept I want to look at is probability.

Probability

Probability as a concept has a particular place in behavioural and psychometric framings of learning, being connected or related to learning in our three constellations of meaning. One meaning of the concept of probability is that some event in the future is likely to happen regardless of whether a prediction that it is likely to happen or will happen has been made.[96] It therefore embraces a physicalist framing of the world and a sequentialist view of causation. It does not incorporate a non-materialist view of the mind and, as a consequence, it does not embrace a semantic view of the relationship between mind and world and a mediational view of learning. The concept only has credibility in relation to physicalist events in the world, as in quantum mechanics, where the physical properties of an object are explained at the level of atomic and subatomic particles. In this view of the physical world, energy, momentum, angular momentum and other properties of objects are reduced to quantifiable phenomena, so that a probable judgement and a judgement about the probability of an event occurring at a second time point from the perspective of a present or first time point can be made. In this rendition of the concept of probability, these two types of judgement are clearly delineated.

A probable judgement of this type refers to the accuracy of the prediction, given that a prediction is about a future event, with the accuracy of the prediction treated here as vague or ill-defined. (It is ill-defined only insofar as there is or could be a larger degree of measurement accuracy.) Furthermore, the learnt event that a judgement is being made about (between two time points) is in itself probabilistic or not likely to occur. The theory cannot predict what will happen, not because it is impossible to measure what will happen, that is, the measuring technologies are not and can never be appropriate for this task, but because what is being measured or described has uncertain properties. A notion of quantum entanglement, where the properties of an object are so intertwined that a description of the whole in relation to its parts becomes impossible, is an example of the dilemma faced by

[96] Probability can also be understood in a Wittgensteinian sense (Wittgenstein, 1969) as a state of being that we have to live with, a state characterised by a lack of certainty.

these types of theorists. Is this inability to precisely or probably explain a particular entanglement the result of a measurement incapacity, or is it caused by the nature and constitution of the entanglement itself, and how it works?

Probability as a concept has traces and remnants stored in the first of our nexuses of meaning, the antecedent framework. This antecedent network is contentful only insofar as conceptual objects have already passed on their meanings to other meanings and meaning structures, although this does not rule out sets of inferential relations persisting into present and future actions. These inferential relations are multifaceted, and their semantic contents lie in their specific applications, such as pluralisings, praxis(ing)s, negatings, learnings, forcings and so on. Even in the most basic of thought-actions, such as identifying learning objects or objects to be learnt as distinct phenomena, we are engaging in inferential processes.

In the mid-fifteenth century, the word, *probabilite*, was loosely associated in semantic terms with a 'likelihood of being realised, appearance of truth, quality of being probable', derived from the old fourteenth-century French word, *probabilité*, and from the Latin word, *probabilitatem*, which some have described as referring to the object's credibility or probability (see *Online Etymology Dictionary*, 2001–23: entry on 'probability'). In this antecedent rendition (in a semantic sense) of the word-object, there are three clearly delineated notions being proposed (and perhaps a series of relations between these three sets of meanings): a sense that a prediction about what was likely to happen in the future had a degree of uncertainty about it; a sense that a probable or uncertain judgement is related in some way or another to a truth-construct or to a set of criteria which are truthful (credibility is being understood here as relating to the truth or otherwise of the discursive object or object-configuration); and a sense that the concept refers to a quality or property of an object or object-relation. In the early eighteenth century, the term was used to describe the 'frequency with which a proposition … is found true in the course of experience' (*Online Etymology Dictionary*, 2001–23: entry on 'probability'). This linkage to frequency is also a linkage with a mathematical precision[97] as it is understood in empiricist and atomistic terms, with its suggestion that experiential knowledge can be known without any form of mediation. The concept was further integrated into forms of practical knowledge or those that have praxical consequences,

[97] Precision is itself a concept, and therefore is polysemic, semantically contested, networked, interactive, powerful and dynamic.

such as weather forecasting, or the development of intelligent machines, or in IQ tests. In all these cases, probability is being used to measure (and at the same time give credence to) evidential support relations. The concept of probability also once had the meaning of probity, where it referred to the amount of authority a witness in a legal case could have and was given. This referred to other factors than the relevance of the participant in the prosecutor's case, such as the social status of the witness or the position that the witness held in society.

Probability as a concept and as a practice, then, has taken on a frequentist meaning, where the probability of a predicted event denotes the relative frequency of occurrence of that event in a series of happenings or outcomes of an experiment (natural or otherwise) or in real life. This refers to the tendency of the experiment to lead to a specific and definite outcome. In this case, numbers are assigned to this sense of probability, as an utterance by a person. It is therefore a degree of belief. Bayesian probability is an example of this (see De Finetti, 2017), with the calculation comprising expert knowledge (indicating a notion of prior probability distribution) and experimental data (understood as a likelihood function). Incorporating both prior distributions and likelihood functions results in a probability distribution that is future-oriented and has taken account of everything that is currently known that is relevant to the situation in hand. Bayes's theorem then refers to the probability of an event occurring in relation to the workings of all the other relevant events and occurrences, and it is expressed mathematically.[98]

The concept of probability can take a linguistic form, which has semantic consequences, as a modal object. In the English language the principal modal verbs are: can, could, may, might, shall, should, will, would and must.[99] These verbs modify semantically the meaning we can give to other verbs. This modification can take the form of offering a degree of certainty or uncertainty to an utterance; so, we can say that learning is ever-present in our activities in the world (there is a strong possibility that in the next set of events, there will be a learning element in each of them), that learning as a practice could exist on another planet (there is a weak possibility that the predicted event will

[98] P(A\B) equals P(B\A) × P(A) when this is divided by P(B). *A* and *B* are events, *P(A\B)* is the conditional probability that event *A* occurs given that event *B* has already occurred. *P(B\A)* has the same meaning but with the roles of *A* and *B* reversed, and *P(A)* and *P(B)* are the marginal probabilities of event *A* and event *B* occurring respectively.

[99] This utterance and some of the utterances below are enframed in a notion of correct English usage, with all its implications.

happen), that learning as a concept may exist on another planet (this implies a strong certainty about a predicted event), that learning might exist on another planet (this implies a lesser degree of certainty), that learning as a practice shall exist on another planet (this shows a strong intention or assertion about an event that will happen in the future), that learning as a concept and as a practice should exist on another planet (this is a suggestion or piece of advice, and it is only used when talking about probable events), that the practices of learning will exist on another planet (this suggests that the event that is being predicted has a real possibility of happening), that learning generally would exist on another planet (this suggests that the future event is imagined and not real), and that learning must exist on another planet (this is used to show or indicate that the utterer thinks it is very important or necessary). All these different meanings given to these modal verbs are degrees of probability, importance, certainty and graded belief. Probability, then, is a social category,[100] as is the idea of prediction.

Prediction

Those subscribing to empiricist and positivist philosophies claim that it is possible to predict events, and this is founded on the idea that both the original account (at the first time point – T_1) and the predicted account (at the second time point – T_2) are sufficient in all essential respects. If we reject or put to one side this knowledge claim, then we need to think about these associations, not as laws of constant conjunctions, or even as determinate causal sequences, but as tendencies of powerful objects, and these tendencies are understood as the properties of those objects, and not as predictive behaviours that have not yet been performed. Scientific realists and statistical positivists generally subscribe to a Humean theory of causality, and this is founded on the idea that although it is not possible to observe a relation between cause and effect, it is possible to identify a persistent association between two or more events, and then infer a causal relationship.[101] A repudiation of this view of causality is

[100] Everything I say here is about the concept of probability and not about its pedagogy. Although the latter is an important element, there is not the space here to develop the notion further.

[101] This is one interpretation of David Hume's notion or idea of causality and the most common one, and he makes this point repeatedly in his writings. Here is one instance of it (Hume, 2000: 161): 'All ideas are deriv'd from, and represent impressions. We never have any impression, that contains any power or efficacy. We never therefore have any idea of power.' There are many other instances in his *A Treatise of Human Nature*.

an essential building block for a notion of dispositional realism or for a determination that objects have causal properties, and thus dispositions of one type or another.

Objections to Hume's theory of causality have been frequently made. It cannot account for spurious associations or order cause and effect, and there is no guarantee that all the possible interacting variables[102] have been identified. Furthermore, it is reductive because it treats these variables as real, and therefore elides epistemology with the world and what it is. The meaning of a concept is always embedded in a framework of other concept-meanings, and in pointing to the detheorisation of much contemporary research about the concept and practice of learning, traditional and reductionist forms of research and knowledge development separate out the concept from the framework, in order for it to have the properties of a variable. Having detheorised the concept, relations are then identified between these different variables, even if the variable itself does not have a meaningful relationship with the world. (Such relational exercises include: descriptive statistics; basic hypotheses tests, such as t-tests, ANOVA, contingency tables and chi-square tests; classic regression models, including logistic and probit regressions; multilevel regression models; factorial analysis and structural equation models; and data envelopment analysis, propensity score analysis, stochastic frontier analysis and simulation.)[103]

Most research in the field of learning is predicated on a detheorisation and a semantic reduction of the concept(s) being examined. The frequently cited injunction that in order to make a comparison between institutions or systems of learning, the first move we should make is to reduce the various elements of the setting being examined to sets of numbers is to adopt a restricted view of the concept and how it is used in the world, with the consequence that this detheorisation process means that the researcher understands objects, relations between objects, arrangements of objects, people and causality in a particular way, which cannot relate to what those objects are and how they operate in the world. It is the enumeration of the object which acts to delimit the way the object (material or discursive), the object-relation, the object-configuration or the person can be understood, and what follows from this is that it can produce a distorted view of what is being

[102] I am using the term 'variable' in the same way that a statistical positivist might use it.

[103] The use of some of these techniques has been described by a leading quantitative researcher in the field of education as getting us closer to the real world. He was wrong then and is still wrong now.

investigated. Some objects (both conceptual and material) are already framed enumeratively, for example, money[104] or scoring in the game of cricket, and thus are not detheorised or semantically distorted if the mode of investigation or appreciation is broadly quantitative; however, most objects, especially those that operate in the space of learning, are not framed enumeratively, or at least not framed exclusively in enumerated ways. Another one of these types of concepts is correlation.

Correlation

Discovering a correlation between two discursive objects does not imply or infer a causal relationship between them. All that it signifies is that two object-configurations are manifested over time in similar ways, or display a similar pattern of occurrences. In order to make sense of this type of knowledge claim, we need to understand how the object configuration is being conceived as a variable, for example, that the defining characteristic of that object-configuration is that it can be measured. Measurement is here being understood in methodological terms as a bias towards one of its relational properties, that of one-to-many (pluralising) relations – its quantitative dimension. A variable, then, under this description refers to a person, place, object or phenomenon that allows the object under scrutiny to be measured in some or another way.

Learning can be treated as a variable and framed in fact(ing) terms; however, this involves a crude rendition of the object or objects (for example, correlations between learning as a measurable quality and other variables such as race or gender, which equally have been treated in a reductionist fashion), with the consequence that the concept (in our case here, learning) is treated in a monodimensional and monosemantic fashion. As we have seen, a number of distinct meanings can be given to the notion of learning: as transferring and transformational information, as modality, as evaluative description, as minded capacity, as normative categorisation, as *Bildung*, as distinguishing marker, as ethical desiderata, as beyond human capacity and more (see Chapter 2). Each of these functions can be enframed mathematically; however, in doing this some meaning is lost. The final example from this set of concepts and conceptual-frames is comparison.

[104] It should be said here that if we are dealing with monetary relations, such as exchange, distribution, storage and the like, then enumerative distortions are likely to detheorise these objects.

Comparison

Comparison in its mathematical form reflects the direction of difference between two or more numbers. This refers to whether one number is larger, smaller or the same as another. The comparative element – comparing one object with another – is always understood as a relationship between objects in relation to one and only one dimension, a relationship that mathematics has deemed to be appropriate. The semantics of the operation is reduced to one component and one valorisation, giving a distorted understanding of the object-relation, comparison, which is of interest. Place, position, sequence, dimension and meaning are reduced to spatial extension.

If we compare two objects or object-relations or object-configurations, we are, in the first instance, identifying their characteristics, and then determining which characteristics are similar to each other, which are different, and in what way. The second part of the process is to locate those comparisons in our three conceptual frameworks: the antecedent, the coextensive and the pragmatic; in other words, to determine the semantic dimension in making a comparative judgement. Comparing two objects, object-relations or object-configurations has to be contextualised, and what is meant by this is that the three orders implied by the three conceptual frameworks allow certain types of comparisons to be made, and thus need to be examined in detail in order for us to make a useful and appropriate comparison between these different objects. What has been deemed to be an object that is different from another object, antecedently, coextensively and pragmatically, determines what object can be compared with another, and in what way.

In language, we can grammatically – in its semantic rendition – compare objects using adjectives and adverbs as degrees of comparison. However, comparison should not be understood as a method, as it frequently is, but as a deconstructive strategy, where the intention is always to explicate the object semantically. For example, in imaginative writing, the comparative trope is the simile, a figure of speech that directly compares two objects or things by using connecting words (such as, like, as, so, than, or verbs such as resemble). Comparison, then, is a key concept in a picture of the world that has dispositional, conceptual and semantic elements. As with all these foundational concepts (averaging, probability, prediction, correlation and comparison) mathematical expressions of them act to reduce or deflate or diminish meaning.

Mathematics

There are three possible alternatives as to how we can use mathematics to illuminate concepts and mind–world and world–mind relations. The first of these is that mathematics is a useful formal linguistic system, which mirrors and allows us to access the world. This view of the relationship between mind and world is one of direct and unmediated realism. The second viewpoint understands mathematics as a system to enable us to discover causally inert and non-normative objects in the world; however, as a language of description, the accounts of the world that it produces do not reflect the world as it is. It can only act as a particular version of the world; if we had used a different language, a different view of the world would have resulted. The third viewpoint about mathematics is a full-blown constructivist perspective. In this scenario, mathematics is understood as in part a co-construction of mind and world – mathematical statements have normative and constructivist as well as descriptive elements. Which of these we choose to subscribe to has direct implications for understandings of learning.

The disposition of numeracy, or intelligent quantifying, supervenes on mathematics – what mathematics and its relationship to the world are provide, in the first instance, its semantic content.[105] Three important non-Platonic accounts of mathematics have been formulated: logicism, formalism and intuitionism. These were, in effect, responses to dominant (for long periods of time) Platonic views of mathematics. Within the Platonic conception, the subject matter of mathematics is abstractive qualities. For example, Kurt Gödel (2003), a neo-Platonist, argued that mathematical objects are objective insofar as their existence as entities does not depend on the actions and activities of human beings, including current members of the human population and past ones. They have timeless properties. One of the implications of this is that we enter into a relationship with these objective entities, which is analogous to the relationship between any other physical object and our minds; that is, we develop mathematical concepts. We do this, according to Gödel, through a form of mathematical intuition.[106] Our mathematical intuition provides evidence for determining what these mathematical principles might be. Numeracy, then, would be the generalised capacity, operating at the level of the mind, to use these mathematical principles either in self-reflective ways, or in actions or activities in the world.

[105] See Horsten (2019).
[106] Gödel's notion of mathematical intuition is vague and unconvincing.

Platonic views of mathematics were challenged in the twentieth century by logistic, intuitionist and formalist accounts. The first of these, logicism, is an attempt to reduce mathematics to logic.[107] The reason for attempting to do this is because it was thought that logical rules would be the objectifying bridge between mind and world, as they could then be understood as having both ontologically real properties and properties that allowed them to be construed as properties of the mind. This attempt at reducing mathematics to logical principles proved to be unsatisfactory for two reasons. First, it proved impossible to find equivalences between mathematical and logical operations in every single case, and logical principles failed to account for even basic mathematical operations. Second, the move to express logical operations in mathematical form, and thus give them a role in conceptualising the important but difficult mind–world relationship, did not solve any of the epistemological problems associated with Platonic attempts at describing and explaining the world.

The second non-Platonist account of mathematics became known as intuitionism and, following a Kantian perspective, suggested that mathematics is in virtually every instance a construction or at least an activity of construction. Under this conception, universal truths that play a part in the concept of numeracy can be derived from particular representations, where these particular representations are construed as predicates of the mind. This raises issues to do with the object that is being represented, what that representation is, how relations between objects in the world can be construed, and, fundamentally, what this intuitionist project actually entails. It also places at risk the idea of forming and using a concept such as numeracy, because the constructed nature of the activity seems to preclude mathematical knowledge being construed as an ontological and real universal of coherent thought.[108]

The third non-Platonist account of mathematics is what became known as formalism. In this revision of Platonic ideas, it was suggested that natural numbers are foundational in mathematics. However, these are not constructions in the mind, as the intuitionists understood them. Natural numbers are construed at the level of the mind as symbols, which are not thought of as abstract objects because they are simply embodiments of concrete objects. One of the problems with this conceptualisation of mathematics is that higher forms of the activity do not and cannot fit this pattern, since they cannot be interpreted in a concrete

[107] See Russell with Whitehead (1925–7).
[108] See Strawson (1959).

manner or even transposed to an object level. On this account, the concept of numeracy comprises an ability to manipulate symbols both in providing authentic descriptions of the world and in being able to use those symbols in concrete action settings. It is the way the concept is framed that determines its functionality, or how it is and can be used in the world.

Numeracy, then, has to be[109] a disposition which is informed by a particular viewpoint about mathematics, about mathematical forms, whether Platonic, logistic, intuitionist or formalist, and how these forms relate to the world. First, mathematics also has to be understood as a language of description, invented and constructed by human beings in the world, and its use, as with any other language, has representational elements, powerful practices and self-referential modes of justification and form. Second, we can say that the semantic contents of the concept of numeracy are contested. Third, we even might want to say that the concept is polysemic, although this may be as a result of ignorance and misidentification rather than anything that is inherent in the concept itself. We now move on to look in the second part of this book at a number of different manifestations of learning: bureaucratic, curricular, social and ethical. Before we do that, I need to explain, even though only briefly, the contents of Part Two.

[109] This is a logical necessity. The relationship between logical necessity and causal necessity is a complicated matter, and it will not be addressed in any great detail here.

Part Two
Learning relations

In the second part of this book, my purpose is to examine four types of relations that learning as a concept and as a practice has. These are a bureaucratic theory of learning (see Chapter 7), a genealogy of curriculum and learning (see Chapter 8), a social categorisation of learning (see Chapter 9) and an ethical theory of learning and knowledge (see Chapter 10). There are six elements or components of these relations (bureaucracy to learning and learning to bureaucracy; curriculum to learning and learning to curriculum; categorisation to learning and learning to categorisation; and ethics to learning and learning to ethics): behaviour, interaction, role, valorisation, context and belief.

These object-relations can be understood as: pluralising (as an object-to-objects relation); relational force (as a strong or weak object-relation); ordering (where this refers to hierarchies of objects being created), representing what is there in the world; endogenous (or exogenous) relations (where this refers to the direction of change in the original object); framing and reframing relations (where these refer to how orders of things work); categorising and re-categorising relations (where the concern is with the essence or non-essence of objects in the world); negating relations (where this refers to the dialectics of the change process); and in many other ways. All these four relational configurations are enframed in some way or another. I start with a bureaucratic theory of learning, conscious all the time that the examples given in this chapter (the UK Research Excellence Framework, UK Ofsted Inspection protocols, and training courses and programmes at a UK university) are UK-centric. These three examples of a bureaucratic framing of knowledge, however, are mirrored, not exactly but in all their essentials, in many other parts of the world. My choice of these three examples also reflects my positioning in the world, as a UK academic based in London.

Finally, in chapter 11 I examine the ideas of critical learning and knowledge. I suggest that the meta-concept of learning has to be an integral part of any social theory that we might want to develop, and that if we are to understand what the concept and practice of learning is, then we have to look at a vast array of relevant concepts and conceptual practices.

7
A bureaucratic theory of learning

For this chapter, I borrow a descriptive term from Michel Foucault and adapt it for my own purposes. This is his notion of a dispositive or *dispositif*. In doing this, I am trying to make sense of two matters: the make up or constitution of an important discursive configuration that takes as its central concern the concept and practice of bureaucracy *and* its modality and medium. The modality refers to the type of information and/or the representational format in which the information is stored. The medium is the means whereby this information is delivered to a person or group of people. Foucault, in a well-known statement, defined the *dispositif* in the following way:

> What I'm trying to pick out with this term is, firstly, a thoroughly heterogenous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the apparatus. (Foucault, 1980: 195–6)

Foucault goes on to argue that the apparatus consists of these material and discursive objects and a series of connecting or relational object-relations, which shift over time and do not have a stable existence. This leads to a number of unstable discursive formations, which have an influence in society, at different moments and in different places. An apparatus or *dispositif* is a set of objects joined together by a series of connectives and relations that offers an account of an object or objects in the world, and it may even act to create objects in the world. Implicit within every object-formation are: an account of a person, including their dynamic capacities

and affordances, and the environments within which they are situated; an account of the relationship between a person and their environments; knowledge about understanding, learning and change, with regards to the person and the environments in which they are located; inferences from these accounts, and conclusions about appropriate representations, media for representations and learning environments. We can say in this context that they are enframed by something or other. Furthermore, what needs to be said time and time again is that an apparatus or *dispositif* can never be a simple determinant of identity, behaviour or action. They are structured in a variety of ways, and both this meta-structuring and the forms it takes are relative to time and place. These meta-forms refer to constructs such as the relations between singulars and generalities, the balance of performativity and denotation, relative value, hierarchical binary opposition, truth-value and reference.

The first of these refers to the setting of boundaries between objects in the world – how an object is recognised as the object it is. It is also about the relations between singulars and generalities, and it refers to those discursive objects which, when considered together, allow a general description of a set of objects, such as a bureaucracy. A second meta-form concerns the balance in these compound objects between denotation and performativity,[110] or between offering an account of something with no intention of changing the world and offering an account which is intended to change an object or to create a new one. The person is not intending to merely describe what they think is in the world, but in making this statement, they intend to bring something into being. There is, of course, no guarantee that performative statements will achieve their purpose. Denotative statements have a different function, in that they seek to describe what currently exists, what might exist in the future and what has happened in the past. The intention of the utterer is not to bring anything into being in the world. Statements about learning and a bureaucratic ethos can be characterised in terms of the balance of performativity and denotation within them.

A third meta-epistemic form concerns the relative value given to an object in comparison with another object, and a fourth meta-structuring device refers to the bipolarity of descriptions and dispositions, that is, an object-descriptor is defined in terms of another object-descriptor of which it is the mirror opposite. As a result, certain words, phrases, descriptors

[110] This distinction is derived from the work of the philosopher J. L. Austin (1962) on denotation and performativity. It has subsequently been taken up by many sociologists, who use the two terms, and the relations between them, in slightly different ways.

and concepts are understood in bipolar terms, which determines how they can be used as a resource for understanding the world. A fifth meta-principle refers to the truth-value of a statement. Making a statement about bureaucratic learning, for example, means that a particular type of truth-value is being invoked. For example, a correspondence theory represents the truth of whether the statement mirrors the reality that it seeks to describe. As we have already seen (see Chapter 3), a number of such theories are in existence, some fairly primitive, such as naive appeals to facts, others more sophisticated, so that they avoid mirror imagery and at least take account of sceptical arguments. On the other hand, coherentist theories are so constructed that they comprise a belief that the truth-value of a statement does not lie in its reference to an external world but rather in whether it fits coherently in a web of knowledge.

A sixth meta-principle refers to the way particular ideas, concepts, phrases and descriptors are embedded in networks of ideas, concepts, phrases and descriptors, and have a history. So, for example, learning as a concept is positioned in a complicated network of other concepts, such as innateness, difference, valuing, power, genetics, pedagogy, time, space, technology, biology, progression, reflection, evolutionary theory, identity, consciousness, genealogy and many more.[111] A web or entanglement is a suitable description here of this set of relations.

We have to be extremely careful about these arrangements or apparatuses or *dispositifs* on three counts: the first is that it is important not to overvalue and thus exaggerate the efficacy of the properties of these object-configurations, and especially the property of absolute reach or ambit. Second, composed as they are of material and discursive objects, we have to be careful about how both of these relate to each other. Third, as conceptual framings, they are semantically contested, networked, interactive, powerful and dynamic. In that this points to their valorisation, I also want to suggest that valorisations are not steady states, but are, as Foucault (1980: 126) called them, 'lines of light that form variable figures'. These lines of light are also lines of force, pointing to the powerful and inducing power that they inevitably have, and the way they can influence forms of subjectivity and worldly descriptions. Apparatuses or *dispositifs* or object-configurations, then, for Foucault, are composed of 'lines of visibility, lines of enunciation, lines of force, lines of subjectifying, lines of cracking, breaking and

[111] The emphasis in this sentence should be on the words *many more*, since this indeed is the crux of the matter. In this book, I am only able to deal with a small number of all the eligible concepts.

rupturing that interweave and mix together to produce formations' (Foucault, 1980: 127).

The use of new educational technologies is an example of power-relations operating in and through education systems. For Michel Foucault (1979), the introduction of the examination in France in the eighteenth century combined the techniques of an observing hierarchy and those of a normalising judgement.[112] Knowledge of persons was created which had the effect of binding individuals to each other, embedding those individuals in networks of power and sustaining mechanisms of surveillance, which were all the more powerful because they worked by allowing individuals to govern themselves. This is the objectification of the individual as a branch of knowledge, so that the individual could now be described, judged, measured and compared with others. For the first time, the individual could be scientifically and objectively categorised, and characterised through a network of power where the most important factor is the differences between people and other objects.[113] Hierarchical normalisation becomes the dominant way of organising society. Foucault was suggesting here that the process itself acts to position the person being examined in a discourse of normality,[114] so that for people to understand themselves in any other way is to identify themselves as abnormal and even as unnatural.[115]

A bureaucratic formation

A bureaucratic model of organisation and governance has a number of features: complexity, division of labour, permanence, professional management, hierarchical coordination and control, empiricist forms of knowledge and legal authority. A bureaucratic form of institutional governance is impersonal and rational, and based on rules rather than

[112] *Discipline and Punish* (Foucault, 1979) is an extraordinary book. There is only a brief mention of education within it, where Foucault refers to the examination.

[113] An obvious example of this is the use of opinion polls. Opinion polls make certain claims about the truth of people's beliefs within a probability framework. In opinion polling two different but connected notions of probability are used: the first of these is a sampling probability, where the uncertain relation is from the sample to the population, and the second of these refers to the degree of uncertainty that one can make about the recorded result. So, the result is expressed as within certain parameters. They do two things: (i) atomise and decontextualise aspects of the social world; and (ii) fix a notion of truth to a particular type of data. Even in their own terms, they are frequently wrong.

[114] Normalisation is another example of the atomisation of identity and, in a general sense, of reality.

[115] The notion of unnatural desires has a long and sad history.

on ties of kinship, friendship or patrimonial or charismatic authority. Some accounts of learning, but not the account being argued for in this book, have bureaucratic elements – we can call these training models. Max Weber's (1964) notion of rational activity had three constituents: increasing knowledge, enhanced impersonality and improved control. Rational action presupposes knowledge in so far as it requires an understanding of those economic, political and social circumstances that form the backdrop of our actions, because to act rationally is in part to be able to reflect on them in relation to the probable consequences of any actions that might be contemplated. The second element in his thinking was impersonality, which he understood as a sense of objectification, such as reducing the complicated lives of individuals to sets of numbers and placing them within suitable categories.[116] The third element is control. Rationalisation involves increasing control of human beings in the lifeworld, prompted in part by scientific and technological mechanisms, both material and discursive. This meant that human beings were increasingly subject to legal, technical, political and social enablements and constraints, and, perhaps more importantly, to forms of discipline and control that were reflections of the puritan ethic that so pervaded the society in which Max Weber lived.

A particular manifestation of the bureaucratic ethic is the discursive learning formation, *new public management*, and this has had significant effects on the governance of UK higher education institutions and, no doubt, elsewhere. The major goals of this discourse are to improve the effectiveness and efficiency of the public sector, enhance the responsiveness of public agencies to their clients and customers, reduce public expenditure, and improve managerial accountability. In addition, it has resulted in the creation of a new cadre of managers. This new cadre of managers consumes resources, which could have been spent elsewhere, although the argument is made that they produce efficiencies. These efficiencies are achieved in a number of ways: by making staff work harder (academic and administrative, although this distinction has categorising, decategorising and recategorising dimensions) and in more productive ways; by constructing and using a particular type of knowledge, broadly conceived as technicist and bureaucratic; and by injecting into the system as much competition as possible – this involves a reconstitution of the notion of academic identity, so that loyalty is towards the institution rather than to the discipline. New hierarchies are established so that

[116] See Kim (2019).

old hierarchies constructed round a notion of academic capacities (that is, expertise in the core activities of academic life, such as researching, writing and teaching) are replaced with hierarchies that are underpinned by bureaucratic forms of knowledge.[117] The way signs are interpreted, and judgements are made, is reconstituted by the bureaucratic model of organisation. Furthermore, these acts of interpretation and judgement are reduced to binary choices (or at least to a small number of choices), and this affects how we can understand the object and how we can interact with it. Professional loyalties are marginalised, and rewards and sanctions are tailored to fit this model, so that knowledge construction within universities is reconstituted, and this refers both to the behaviour of the academic within the institution and to their academic work.

Max Weber (1964: 219) argued that bureaucracies are 'the most rational known means of carrying out imperative control over human beings', and that a bureaucratic administration achieves its purpose by 'domination through knowledge'. He suggested that a bureaucracy has six features. The first of these is that the area of life that forms the bureaucracy should be delimited and governed exclusively by rules. This entails a clear division of labour (a hierarchical division of labour prevents duplication of roles, allows people to specialise and enables them to develop expertise in that area) and standard operating procedures. Second, a hierarchy of roles has to be set up with clear responsibilities and statuses, designations of power and authority, and chains of command. Power flows in a downward direction. Third, any actions performed by members of the bureaucracy need to be recorded and preserved so that a permanent record can be kept, to allow accountability mechanisms to operate in the most effective way. Fourth, expert training for its members is a prerequisite so that the knowledge the bureaucrat possesses is formed and reformed in accord with technological, organisational and market imperatives. The final two precepts are that members of the bureaucracy should devote their full attention to their work, and, more importantly, they should become accustomed to learning, following and enforcing rules that can be unequivocally interpreted. The overall effect is to increase efficiency and predictability. These rules and regulations, and the administrative procedures that accompany them,

[117] These hierarchies are frequently more pernicious than those they replaced, and I think it is fair to say that they exclude forms of learning that we might want to call dialogic, cooperative, agentising and formative. Indeed, all the forms of learning that I have identified (see Chapter 2) – epistemic, technical, educative, bureaucratic, ethical, cognitive, behaviourist, materialistic, sociocultural, transgressive, phenomenological and curricular – have their own hierarchical structures, with different consequences for each of them.

are designed to limit personal favouritism and promote fairness and equity for the benefit of the organisation as a whole. The bureaucratic discourse is extremely powerful, and it has had powerful effects, not least in the use of anonymous refereeing and judgement, where power relations are concealed from those who are being judged.

A theory of bureaucratic learning includes the idea that knowledge can be broken down into its smallest parts, with only those elements of it that can be incorporated into a bureaucratic view retained. The rest are discarded. This process therefore values, through elimination, those dispositional, propositional, skill-based and embodied forms of knowledge, learning and being that fit into a bureaucratic ethic and ethos.[118] This mode of learning is rule-based insofar as the detheorised objects of learning, the pedagogic methods employed, and, fundamentally, the assessment and evaluation practices that accompany bureaucratic learning, are given prior to, and priority in, any acts of learning that might take place, and reflect a particular arrangement of knowledge and learning practices that is hierarchical, identity-forming and reductionist.

Anonymity

An example of a bureaucratic framing of a learning object or object-configuration is peer-reviewing of written or spoken texts (articles, chapters in books, book proposals, books, conference presentations, teaching sessions, curricula, indeed most of the activities that make up the work of an academic). This is treated now as the holy grail of quality in universities, and by university teachers and researchers, in that it allows publications and performances to be graded in various ways, for example, in the UK Research Excellence Framework (see below). Academics and practitioners in the UK (and round the world in other systems that have similar purposes) are persuaded that the only legitimate path for them to follow if they want their work to be recognised in the world is to take part in these various types of reviewing exercises. Those types include single

[118] The British Educational Research Association (BERA), the professional organisation for many academics and researchers working in the field of education in the UK, has recently reconstituted itself as a bureaucratic organisation: giving out prizes for this and that, working closely with governmental forms of knowledge such as the knowledge accrued from the Research Excellence Framework (REF), designating a certain type of knowledge as being more correct than other types, removing and dismissing people with transgressive views from positions of authority within the organisation, persuading others to adopt training models of learning as opposed to educative models, and creating or affirming correct ways of researching and understanding education as a discipline. Bureaucratic modes of management have some very unpleasant consequences.

anonymised reviews of a proposal, text or performance, where the author or performer is not told the identity of the reviewer, with this reviewer chosen by the editor of a journal or a publishing house or a person of some seniority within their organisation, or with an appointed evaluator from a governmental or quasi-governmental organisation. A second type is where more than one reviewer is asked to look at the piece of work, with, in the case of a written piece of work, these reviewers being anonymised. A third type is an open review process where the identity of the author or performer and the reviewer is known by all the participants during or after the review process. A fourth type is a transparent peer review process, where the report is made publicly available, with the reviewer choosing to reveal who they are, if they so choose. A fifth type includes a collaborative, open and formative dimension to the work, so that reviewers and authors/performers work together on improving their work, and there are no hidden or concealed elements in the process. The final type of reviewing comprises referencing work that has already been published, usually without the consent of the author/performer. The parts of these processes that come under the most scrutiny are: the anonymity of the reviewer, the choice of reviewer, the collaborative and formative nature of the exercise, the power-plays that are ever-present in these exercises, and issues that relate to truth, depictions of reality and consequences.

There are two anonymising moments in these processes: the reviewer, assessor or critic concealing their name from the person who is being reviewed, assessed or critically evaluated, and the person who is being reviewed, assessed or critically evaluated concealing their name and identity from the reviewer, assessor or critic. In the first of these processes, if it can be sustained, anonymity is used to facilitate, as far as this is possible, a route into a truthful account of the object or object-configuration. The fear is that the reviewer, if they are known to the person whose work is being evaluated, will not give a truthful account and valuation of what they are looking at, because they do not want to be seen by other people as being overly critical or excessively censorious. They also do not want in a bureaucratic sense to have to enter into a correspondence with the person whose work is being evaluated. This is an arrangement of power in the construction of an evaluative report, and it contributes in however small a way to a future arrangement of objects, object-relations and object-configurations in the world. There is an alternative to anonymisation, and this is full disclosure.

Self-anonymisation works in a different way and has a different purpose. For example, the internet has a significant role in processes of personal identity-formation and public or private displays of

selfhood.[119] Fragile public displays on the internet are common. Social media platforms are an essential part or consequence of the development of the internet, with online abuse a persistent feature of these platforms. It has been suggested that such abuse is the result of the internet allowing online anonymity – many social media users set up accounts using aliases and without images of who they are. It is not so much that they want to conceal their identity but that they want to project a different type of identity into the public domain – a sense of projected identity that is vaguely threatening and unpleasant. The internet and the way it works allows this form of projection, and this gives credence to the idea that identity is a formation and a projection rather than a given or imposed category.

What, then, do we mean by this notion of anonymity projection? It might consist of a desire not to be labelled as such by powerful people and institutions that are other to the social abuser. It may also have consequences for the person, and thus anonymity acts as a cloak or protection from those consequences, which includes platform banning (as with Donald Trump and Twitter [now known as 'X'], although he has subsequently been reinstated) or, in certain circumstances, criminal sanctions. However, this activity of abusive behaviour, shielded by anonymity, is more than this. It constitutes an example of identity traction in the world – the person, as a result of what they do, is saying two things: 'I have the power to hurt you' and 'You are wrong in particular ways'. It is an agentising act for the person concerned.

Paradoxically, for many social media users who anonymise their contributions, their intent is not to hurt, insult or endanger other types of people. For example, social media users in LGBTQIA+ communities, who are particularly at risk from hurtful social abuse, can negotiate an identity formation online without risking distortions and deformations from other powerful groups of people. In addition, they can develop a sense of community, transgressive or otherwise, that would be denied to them if they gave their full names and formal identities. The experience of anonymity becomes much more about personal reflexivity and learning. However, it also gives space and time to those social abusers (and it gives credence to their abuse, and what that abuse represents in the world) that we are concerned about here.

Choice of reviewer is also an important part of the proceedings, by journal editors, publishers, inspectors, evaluating bodies and the like.

[119] This points to one of the most important manifestations of internet use – the capacity of an individual to develop a private or public sense of identity and selfhood. The two are not necessarily alternatives, and the latter is almost bound to be a projected sense of what we would like to be.

The assumption that is made by these people is that there is a universal and non-ideological notion of quality, which they can then use in their evaluation, assessment or judgement. For example, a reviewer who works to a set of beliefs that we might want to describe as positivist/empiricist is asked to review a piece of work that is fundamentally semantic and semiotic in intention and in design. The result is a mismatch and an erroneous judgement. The process is also inherently conservative (as the piece of work being assessed is being judged against prevailing and perhaps even regressive understandings of the subject matter) – new work is disadvantaged in the game that is being played. Those who support this system of anonymising do so with a passion and fervour that is difficult to counteract.

Anonymising acts to prevent collaborative and formative processes working effectively. For example, a clear distinction can be made between those evaluative or assessment-related activities which contribute to learning and those which allow an evaluation or assessment of what is happening or what has happened, within an institution or with a particular learner. Learning and assessment practices on a programme of study, such as a curriculum, can be regarded as formative if evidence is provided of a learner's achievements in relation to knowledge, skill and dispositional acquisitions, and this evidence is used by the teacher, the individual learner and their fellow learners, where the intention is to make decisions directly related to their subsequent programme of learning. Assessment is used formatively, then, when it directly influences the learner's cognition. A learning programme or curriculum consequently needs to make a clear distinction between summative and formative assessment. If these two functions are conflated, then the curriculum is likely to be distorted; and, indeed, this is one of the principal defects of many curricula round the world, and of international assessment systems such as the OECD's Programme for International Student Assessment (PISA). Formative and collaborative systems of evaluation, review and judgement are frequently marginalised or discarded by politicians, policymakers and policy-implementers. Another example of a bureaucratic mechanism is school inspection processes in the UK.

Inspection

At the time of writing, a coroner in the UK has just reported on the death of Ruth Perry, headteacher of Caversham Primary School in Reading. The exceptional verdict was of 'suicide contributed to by an Ofsted

inspection'. For many years, the inspection of schools was conducted at the national level (England, in this case) by Her Majesty's Inspectors (HMI) and at the local level by local school authorities. Both of these combined an inspectorial role (understood as the making of serious and sophisticated judgements about the activities and processes of the institution they were inspecting), which they shared with the school concerned, with offering professional advice, guidance and support to the school. (The balance between these two roles was not always successfully achieved; for example, the system of payment by results, which prevailed from 1862 to the end of that century, meant that the grant given to schools was dependent on test scores and attendance figures reported by HMI.) Their influence was manifested through their visits to individual schools (but not every school), their advice, their surveys of policy and practice, and their provision of evidence to inform national education policy debates. Local Education Authority (LEA) inspections were generally advisory and formative, in intent and design. Inspections and the inspection service were radically transformed in the 1990s, providing for more frequent, comprehensive, summative and systematic forms of inspection. The Education Schools Act 1992 led to the establishment of a new body, the Office for Standards in Education (Ofsted), which replaced HMI and local authority inspections (some HMIs were retained in an advisory role).

A number of criticisms have been voiced of Ofsted inspections, and especially after the death of Ruth Perry, to such an extent that Ofsted is likely to undergo a dramatic reorganisation. (I am writing this just before a UK general election in 2024.) These criticisms are as follows. School inspections have been understood as objective accounts or quantitative calculations of complicated processes, whereas, in reality, this conceals the conjectural, partisan and power-driven nature of the process. If positivist/empiricist methods and procedures are used, leading to single-word or single-phrase judgements, such as 'outstanding', 'good', 'requires improvement' or 'inadequate',[120] then weak and reductive judgements are likely to be made. School inspection requires an articulation, clarification and justification of the values, valorisations and, most

[120] With regards to positivism and bureaucratic/public administrative configurations, and the relations between them, three features of the original positivist/empiricist philosophy are relevant: the unity of science, the verificationist criterion of meaning and the empiricist observation language. Since this philosophy was developed, there have been a number of modifications. The verification principle has been abandoned, the unity of science is still a presupposition, and, as we have just seen in this example, the empiricist observation language remains an important tool, both in relation to the collection of data and in relation to the reporting of findings.

importantly, conceptual frameworks that underpin any accounting of a school's activities. Sophisticated non-judgemental accounts of what is happening in a school can only be formative if teachers, as a result of this accounting, are able to work in a participatory, intelligent and cooperative fashion, rather than in a managerialist and inculpate environment. This requires teachers to work with and through a language which is not reductionist or exclusive of oppositional or interrogative voices. Training models of learning are further examples of bureaucratic and managerialist mechanisms.

Training models

Here is a list of core mandatory training modules for UCL (University College London) staff:[121] UCL Fire Safety, UCL Safety Induction, Information Security Training with CybSafe, and Data Protection and Freedom of Information. Role-specific mandatory training includes: UCL Safeguarding Training, if you work with children or adults at risk, Fair and Inclusive Recruitment at UCL, if you are a recruitment manager, panel member or recruitment administrator, Understanding and Protecting Intellectual Property, Research Supervision, UCL Arena for lecturers on probation, UCL Arena for PGTA Staff, UCL Arena Gateway Workshop, and UCL Safety Training for laboratory staff undertaking dangerous work. The pedagogy adopted in all these modules and courses is a training, and not an educative, model.[122]

A first conceptualisation of the relationship between training and education is that the object of learning and the arrangement of its characteristics at a particular moment in time are the prime determining factors in whether a training or educative model should be used. This argument only makes sense if we accept that training and education constitute two different forms of learning – they have distinctive approaches to learning and how learners experience activities associated with learning.

A second conceptualisation of the relationship between training and education suggests that the determining factor in distinguishing between a training pedagogy and an educative pedagogy is its function or purpose. This requires the identification of a set of differences between

[121] This is my university.

[122] I have just been asked to enrol on seven training courses at my university: Introduction to Equality, Diversity and Inclusion, Prevent at UCL, Change Possible: Sustainable UCL, Data Protection and Freedom of Information, UCL Basic Fire Safety Training, and Disclosing and Managing Conflicts of Interest at UCL.

the two concepts, and then the initiation of a process whereby different functions or purposes are matched to these different models of training and education. So, for example, a teacher is trained to become a teacher because they are required to learn a particular set of behaviours and mechanistic actions. In this scenario, there are no reflective, self-reflective, meta-cognitive, meditative and imaginative elements that we might want to describe as educative.

A third conceptualisation of this relationship refers to the philosophy of learning that enframes it, such as behaviourism, phenomenology, cognitivism, constructivism or materialism. Each of these learning philosophies has different characteristics. For example, behaviourists focus on how human beings behave and not what is in their minds, and, thus, they argue that if these terms are used as descriptors, then they should be replaced by behavioural terms or, at least, those mind-dependent constructs should be translated into behavioural descriptors. This has implications for whether we should adopt a training or educative model, although a decision such as this also depends on which characteristics are given to a notion of training and which characteristics are given to a notion of education.

A fourth conceptualisation of this relationship refers to the values we hold. Such values are embedded in a worldview, with the characteristics of a worldview being: a person's dynamic capacities and affordances, and the environments within which they are situated; relations between a person and their environments; accounts of understanding, learning and change; and inferences from these premises and conceptualisations about representations, media for representations, learning environments and practical actions. A training model has a particular view of these characteristics and capacities, as does an educative model, and they are significantly different.

A final set of possible relations between the two concepts focuses on their manifestations as power stratagems. Training and educative models have different types of relations attached to them, such as one-to-one or one-to-many, strong or weak, vertical or horizontal, corrosive or developmental, endogenous or exogenous, convergent or divergent, framing or reframing, and categorising or recategorising (see Chapter 3). There are different trajectories of power (in history), and consequently different power arrangements can be associated with the use of each concept. Educative models give greater amounts of agential freedom to the learner, and these are sometimes denied to learners in training models. Training models are generally more popular among state bureaucrats and policymakers, and the reasons for this are

clear – a training model acts to reinforce the strength of the hierarchical arrangement of goods and people, and it provides a greater degree of control over its workforce.[123] In addition, each of these concepts has a different history. Fundamentally, the various valuations given to each of these concepts change over time. Many of the activities that were previously thought of as educative are now thought of as embracing a training ethos.[124]

As we saw in Chapter 3, a learning model, such as training, has apperceptive and conceptualising elements. A learning configuration consists of discursive and material objects, object-relations and other object-configurations joined together and persisting over time. Apperception, then, has a number of stages, which characterise most but not all world-to-mind and mind-to-world processes. The sensory input in the apperception process goes through a number of phases: perceptual, neuronal, linguistic, conceptual, reflexive, and praxical or contemplative. For skill-based, dispositional or embodied forms of knowledge, and, in particular, training or instructional forms of learning, the apperceptive or learning process is amended to fit with the essence of the object itself, discarding some stages and giving a greater emphasis to others. The object or objective of this process of learning is a fully functioning and trained human being, who thinks, reacts, speculates and performs their everyday activities in the prescribed manner. This is the military model of learning, and not an educative or agential form of learning. Dispositional learning takes a different form from sense-datum learning in the apperception process, although it shares many of its features, such as educative, ethical, temporal and object-related elements. The dispositions that we associate with a training model of learning are: being obedient and conformist, habit-forming and various forms of avolition. The Research Excellence Framework (REF) is another example of a bureaucratic, managerialist and deagentising mechanism.

The Research Excellence Framework

The latest edition of the Research Excellence Framework (REF) in the UK was concluded in 2021. This is part of a series of national

[123] And, indeed, over other workforces. An example of this would be the institution in which I work, where teachers are trained for their roles in schools.
[124] This is construed by some as a movement from an inefficient system to a more efficient system, rather than a movement from an educative model to a training model.

assessments (formerly known as Research Assessment Exercises) of the quality of research in British universities going back to 1986. The Higher Education Funding Council for England (HEFCE) and the equivalent bodies in Wales (Higher Education Funding Council for Wales [HEFCW]), Scotland (Scottish Funding Council [SFC]) and Northern Ireland (Department for Education and Learning [DEL]) are responsible for organising the REF, and are accountable to the various governments for doing so. As a result, HEFCE and the other three bodies allocate research monies to UK universities using a formula that is decided after the exercise has been completed. The reasons given for having a Research Excellence Framework are: to inform the allocation of nearly £2 billion in public funding invested in research annually; to provide accountability for this public funding; to benchmark and establish reputational yardsticks for universities and departments within them; and to inform university strategic decisions and understand sector-wide trends (among others).

In 2021, 157 institutions submitted the research outputs of 52,077 research staff members for scrutiny and assessment. For each submission, three elements were assessed: the quality of outputs (for example, publications, performances and exhibitions), their impact outside the university sector, and the environment within each university that supports research. In total, the members of 34 subpanels were required to read 185,594 individual research outputs and grade them on a scale which ranged through 4* (quality that is world-leading in terms of originality, significance and rigour), 3* (quality that is internationally excellent in terms of originality, significance and rigour, but which falls short of the highest standards of excellence), 2* (quality that is recognised internationally in terms of originality, significance and rigour), 1* (quality that is recognised nationally in terms of originality, significance and rigour), to unclassified (quality that falls below the standard of nationally recognised work). In addition, they were required to read 6,781 impact case studies. These were assessed against two criteria: reach and significance. The environmental assessment was made in relation to two criteria: vitality and sustainability.

Some panel members have admitted that they were advised to spend roughly twenty minutes on each piece, which might be a 250-page book, a 10,000-word article in a learned journal or a 15,000-word chapter in a book. Time constraints meant that only a superficial reading of the pieces could be made, and it is therefore possible to conclude that the longer and more substantial the piece of work, the less reliable was the judgement being made of it. One consequence of this was

the mistaken assumption made by research directors in universities that researchers should submit refereed articles rather than books or book chapters, an output model that members of natural science bodies felt more comfortable with than those working in the humanities or in some parts of the social science community. The judgements made by panel members were meant to be criteria-referenced, although subsequent accounts of the deliberations that were made after the initial assessments were completed have confirmed that adjustments were made to these initial assessments to bring the 34 subpanels into line with each other, thus providing contradictory evidence to the claims made by university research directors that their internal assessment exercises were in line with, or accurate predictions of, actual results. This has been a series of costly exercises in knowledge production. The result is predictable: a weak, detheorised, reductionist and regressive form of knowledge.

The Research Excellence Framework is a form of instrumental rationality, and it can be understood as a means for controlling the types of knowledge produced in universities, and as a process of delimiting the notion of research itself. Such discourses and judgements, and consequently (though not inevitably) practices round the world, have been dominated over the last twenty years by empiricist knowledge frameworks and forms of instrumental rationality, exemplified by new public management structures and reductive evidence-based policy prescriptions.

Consequently, knowledge-development is understood by many politicians and policymakers as a means for separating out facts from values and norms, or by journalists who refuse to accept that their carefully managed accounts of events and happenings in the world are always ideologically framed, both in relation to their content and to how they are presented, or, of course, by many academics, not least in the field of education in which I work, whose brand of knowledge is both dangerously reductive and philosophically naive. So, for example, some argue that the knowledge frame for any claim in the world, and therefore for its truthfulness, has to be reduced to concepts and relations between them that can be measured – a strategic argument that concludes with the admonition that this is the only way we can proceed, even if we are not able to be absolutely precise in everything we say – or that it is not possible to judge between different and rival theories about the same social object – even though they make such judgements in their personal and professional lives.

Epistemically, this framework of excellence is flawed. First, excellence is being defined in terms of geographical scope, and thus a neat and largely meaningless hierarchy is being set up which does not

reflect the depth and meaning-in-use of the concept of excellence. (Self-evidently, meanings-in-use definitions of words or concepts change in relation to different conditions, and consequently have histories.) Bizarrely, the guidance for the 2014 REF denies that this form of words is about geographical scope, although the explanation for the use of these words does not add much to how they can and should be interpreted. The second point is that the three subcategories used (that is, originality, significance and rigour) are understood differently by different disciplines, or even (and this is more important, given the nature of the divisions used by HEFCE, that is, the 36 subpanels) within those disciplines themselves. Evidence that allows a judgement to be made about a piece of work is domain-specific, and this includes those criteria that an exercise such as the REF uses to make these judgements (whether they are actually used is a different issue, but this is certainly the intention). The third point is that, in effect, the reader or assessor is being asked to grade each piece of work on a five-point scale without paying much attention to any criteria relating to excellence, and, consequently, their judgements are based on the idea that this piece of work is better than this piece, which is better than this other piece, and so on. The reasons, then, for making these judgements are implicit and, therefore, presumably, a variety of notions (some of which are directly in contradiction with each other) of what makes one piece better than another are being used.

As a result of this, league tables of excellence are produced, which allows us in theory (at least this is the intention) to know what the best institutions for research in the UK are. And yet, we have lingering doubts about what we think it shows. There are at least thirty-five different ways of compiling such league tables. Should they show research power, research intensity or institutional capacity? What about the weightings given to the three elements: outputs, environments and impact? Different weightings favour some institutions at the expense of others. And then there are the educational judgements that are made. We are led to believe that if those making these judgements go through the correct procedures, they can act as disinterested judges and produce disinterested judgements. This is to deny that evidence and evidence-producing processes (including judgemental criteria) are domain-specific. Even if those making these judgements are trained so that they have the capacity to follow a set of algorithmic rules relating to calibration, assessment and moderation, there is likely to be an element of unreliability in the exercise of such a capacity. Given all this uncertainty, how much credence should we give to the positions of these institutions in the league tables?

Preparation for the exercise has involved a number of different models of professional development. One model focuses on developing the capacity to make these educational judgements by imitating the processes adopted by the panel members in the actual REF, that is, calibration, assessment and moderation. This is likely to have three consequences. Although the person undergoing such training now has the capacity to make better judgements about the quality of outputs, this does not mean that they have developed their capacity to either produce better outputs or help other people produce them. Making good judgements about quality in research is not the same as developing those capacities that allow them to produce these outputs in the first place. The second consequence is that this process of judgement and peer review is likely to set colleague against colleague. The third consequence is that although this process can allow the identification of good or excellent outcomes, which then can act as exemplars for staff, most genuine processes of learning and capacity development involve in-depth and supported processes of reflection and work, of which this can only be a small part, and this results in holistic processes of professional development being marginalised.

This model of professional development can be contrasted with a process which is directly related to improving the capacities of university staff, and which is focused on those core activities that constitute their academic work. This, in the judgement of most people working in the field, comprises collegial, non-competitive, non-technicist, non-managerial and collaborative processes of learning. In this sense, then, the REF is not concerned with professional development processes, but with the making of inter- and intra-judgements about disciplines, institutions, departments and individuals, which has the effect of creating different cadres of academics: those who can contribute to the exercise and those who teach, for example. It is a costly exercise in allocating research revenues. And, in addition, it is supported by a view of knowledge and capacity-development which can be broadly described as managerial and technicist.

Criteria

The UK Research Assessment Panel for Education has identified three criteria for judging the worth of research texts, and thus by implication the research they report: originality, significance and rigour (see Box 7.1). These concepts can be and are understood and used in different

Box 7.1 Judgemental criteria

Originality will be understood as the extent to which the output makes an important and innovative contribution to understanding and knowledge in the field. Research outputs that demonstrate originality may do one or more of the following: produce and interpret new empirical findings or new material; engage with new and/or complex problems; develop innovative research methods, methodologies and analytical techniques; show imaginative and creative scope; provide new arguments and/or new forms of expression, formal innovations, interpretations and/or insights; collect and engage with novel types of data; and/or advance theory or the analysis of doctrine, policy or practice, and new forms of expression.

Significance will be understood as the extent to which the work has influenced, or has the capacity to influence, knowledge and scholarly thought, or the development and understanding of policy and/or practice.

Rigour will be understood as the extent to which the work demonstrates intellectual coherence and integrity, and adopts robust and appropriate concepts, analyses, sources, theories and/or methodologies.

Source: Panel criteria and working methods (REF2021, 2019)

ways by those whose task it is to make judgements about educational texts, people, institutions or practices, because they are making these judgements from different epistemological and ontological perspectives, even if they are not prepared to admit it.

These three criteria – originality, significance and rigour – are concepts and conceptual frames, and, consequently, they have certain properties, such as being semantically contested, networked, interactive, powerful and dynamic. What this suggests, then, is that these official designations of the three criteria, which are meant to be used in judgements, could have been framed in different ways. Understanding them and putting them into practice is domain-specific. This means that the debate (where the purpose of the exercise is to make judgements that are not domain-specific) shifts from an argument about the inherent contradictions in the making of these judgements to managing these

contradictions, so that the practice of making judgements can seem to be coherent. This involves the exercise of various power stratagems, some of which have become increasingly acrimonious in modern universities.

The point of the exercise is to provide a transdisciplinary and transperspectival view of quality with regards to writing and other forms of production. To this end, an elaborate system of making judgements using what purport to be neutral criteria (that is, neutral between different systems of knowledge production) has been set up. Although the exercise is meant to be about making criterial judgements, in reality, assessors and evaluators will, I imagine, simply grade each of the pieces against each other, using different and equally credible reasons for doing it this way, and not that way.

A criterial judgement is considered to be sound if it satisfies the requirements for that judgement to be made.[125] For a piece to be judged to have met the requirements of being significant, or rigorous or original, it should conform to a model of what significance or rigour or originality means to the person making the judgement, and this comprises two processes: first, that the criterion is adequately defined, and, second, that this general definition is applied to the particularity of the piece in a satisfactory way, so that this piece in part or in its entirety is an adequate example of the criterion. A criterion, then, is a statement about the quality of a piece or any future piece, and implicit within it is a model of what constitutes sufficient evidence for a judgement to be made that it conforms to the criterion, and evidence (that is, significance, originality or rigour) in the particular example being considered here refers to the structure of the piece, whether it shows to the reader that the argument made is significant and so forth. The evaluator or reviewer, who is making the judgement that it is significant, needs to have found good reasons or evidence as to why it meets those requirements. She may also have looked for evidence that the piece has not met the criterial requirements; in other words, she is looking for evidence or examples of places within the text that would indicate that the satisfiers for the criterion have not been met. If she finds a sufficient number of examples in which the author has not adopted a significant approach, then she is likely to

[125] Wittgenstein (1953: §354) distinguished between criteria and symptoms, while at the same time making it clear that all knowledge claims were determined by criteria: 'The fluctuation in grammar between criteria and symptoms makes it look as if there were nothing but symptoms. We say, for example, "Experience teaches that there is rain when the barometer falls, but it also teaches that there is rain when we have certain feelings of wet and cold, or such-and-such visual impressions." As an argument in support of this, one says that these sense impressions can deceive us. But here one overlooks the fact that their deceiving us precisely *about rain* rests on a definition.' I do not think there is much that we can take from this division.

judge that it has failed to meet these satisfiers. Thus, moments of positive affirmation and negative disconfirmation are implicit within the process. If evidence is understood as a sufficient reason or sufficient reasons, as I have suggested in this book, then we also have to be clear about what constitutes a good reason or set of reasons for making these judgements.

Deagentising mechanisms

Michel Foucault (1978) attempted to resolve the problem of the singular[126] (or otherwise) notion of subjectivation and identity. What he meant by this was twofold: first, people should practice processes of desubjugation by acting in an ethical sense to resist becoming subjects, in the sense of becoming something for someone else; and, second, they should act to criticise the limits of the discourse itself (and, in the process, expand the opportunity to think and conduct themselves in the world that is in opposition to what the discursive formation allows them to do). The REF is a part of the discursive configuration that currently structures the working lives of academics and researchers in deagentising ways.

Control is always exercised against a standard or norm. In this case (the REF), it acts against a notion of agency – it is a deagentising process with deagentising consequences. It is therefore an activity that restricts, impedes, reduces and delimits the agency of an individual and, in a large class of cases, restricts the agency of a population. There are, of course, other forms of deagentising: forcing, imprisoning, murdering, propagandising, falsifying, de-educating, de-resourcing (changing the level and type of resources available to people and populations) and regulating (through the passing of laws and through other means). All these forms of deagentising work by changing the constitution and make-up of those discursive and material objects, those object-relations, and those material and discursive object-configurations, that a person has to confront in their everyday life. In addition, deagentising as a concept can only be understood as a reaction against a set of intentional and volitional acts that characterise a person, and thus a population.

These technologies of power, sometimes referred to as technologies of truth (Foucault, 1969), were attempts by Foucault to examine notions and practices that related to power. They were used by Foucault to make three central points. The first of these is that the same procedures that

[126] As in unisemic.

were being used to control nature, production and time were being used to manage human beings in institutional settings, an example of which is contemporary university management practices in the UK and in many other parts of the world. Second, power should be understood in a productive sense as that which shapes, and, more importantly, enables, human behaviour, rather than simpliciter in a purely negative or repressive sense. A third meaning that Foucault gave to technologies of power was that so powerful are these positive forms of power that they can operate to override moral ordinances and beliefs about appropriate conduct held by powerful people in neoliberal institutions, such as universities. Furthermore, in the field of education, it is striking how psychology as a discipline, in conjunction with other disciplines that share its epistemology, has now assumed an ascendency, even with people who do not profess to be psychological theorists.[127]

The Research Excellence Framework, Ofsted inspection, anonymous peer-group reviewing, and staff training are bureaucratic mechanisms, which have, as their principal purpose, the creation of hierarchical differences between individuals, organisations, institutions and groups of people. As bureaucratic mechanisms, they embrace a training model of learning, rather than a formative, developmental, educative and progressive learning model, with all its complexities and rich understandings of human apperception and conceptualisation, a missing ingredient in the now dominant analytical tradition of philosophy in the UK.[128] The next chapter focuses on a genealogy of curriculum and learning. The reason for including a chapter such as this is to suggest that these notions do not have fixed or essentialist meanings, but that as concepts they have to be understood as dynamic and located in time. It is also to suggest that the Foucauldian notion of epistemes[129] has to be treated with a great deal of caution, as some have stretched it to breaking point.

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[127] David Chalmers (1996) distinguished between a phenomenal and a psychological view of the mind.

[128] Analytical philosophy is a broad contemporary movement or tradition in Western philosophy, and especially in anglophone philosophy. It can be traced back to the long line of what can loosely be called empiricists – from Locke, to Hume, to Russell, to early Wittgenstein, to Ayer, to modern day empiricists and so on. It is in opposition to a different and conflicting tradition of philosophy, which can loosely be described as from Kant, to Sellars, to late Wittgenstein, to Brandom, to Gadamer, to Heidegger, to Bhaskar and beyond (I should add, early Bhaskar and not late Bhaskar). Neither is in a real position to make a valid judgement about the work of the other, because their foundational principles are fundamentally different.

[129] At times, Michel Foucault (1969) viewed history as being broken up into distinct epistemes.

8

A genealogy of curriculum and learning

In this chapter, I focus on, and explicate, four important discursive concepts, curriculum, validity, intelligence and learning, with the first and last of these prioritised – a full genealogy of learning would also include other material and discursive objects, other material and discursive configurational objects, and people and their workings. As with all concepts and conceptual framings, they have multisemic, contested and ideologically constructed qualities. In an object-ontology, objects, including human beings,[130] have learnt dispositions or properties. These are conceptual relations in human beings, which cannot be fully determined as to their meaning in definitional and essentialising ways, but only in terms of how they are used. What follows from this is that we can and should understand and use concepts specifically in relation to antecedent, contemporaneous and applied constellations[131] or networks of meaning (and this in turn requires us to give an account of the different relations that there are and can be between our utterances and these networks). Operating within this space involves the giving and asking for reasons, where this activity is understood as making a commitment in the world, with that commitment referring to the circumstances surrounding its content and its consequences.[132] We make different types of commitments to the different types of meanings that are embedded in our three networks and, consequently, when we try

[130] The word *object* is being used here to indicate a sense of being different from another object or entity, and not to suggest that human beings do not have volitional and intentional dimensions.
[131] A constellation, in the sense that I will be using it here, arises out of a conjunction of elements that are relevant to a situation, a setting, a process, a text. The philosopher Walter Benjamin (see, for example, Benjamin, 2007) used the word extensively in this way.
[132] See Brandom (2000).

to explicate semantically our utterances and commitments, we have to pay attention to the different modes of reasoning in each of them (see Chapter 2). The first of these concepts is the notion of curriculum or curricularising.

Curriculum

Four important curriculum tendencies at both theory and practice levels can be identified, although these have to be treated as ideal models, and not as what actually happened or is happening: the systemic-technological, the critical-reconceptualist, the constructionist and the interpretive. To these should be added neoliberal curriculum frameworks, focusing on competences, and extra-national single surface comparative and assessment-driven implementation mechanisms.

What is noteworthy about a systematic-technological curricular framework is the underpinning belief in science as the model for the essential practical activity of determining what should be included in a curriculum and how it should be delivered. Atomism, pre-specification and control are therefore foregrounded, with the curriculum conceptualised in terms of behavioural objectives and an input–output model of schooling. Curriculum-making is understood as a linear process which starts with the development of clear objectives or goals, proceeds through to the selection of content that is specified in behavioural terms[133] – its acquisition must be an observable or testable process – and finishes with the evaluation of that process to see if those objectives have been met. This is underpinned by an empiricist view of knowledge that is central to the way the curriculum works.

Critical-reconceptualist approaches are instrumentalist in design, and they are underpinned by a belief that schooling and the curriculum always represents a preparation for, and legitimation of, a preferred way of life. They seek, through pedagogic means, to surface, and in

[133] Behaviourism is a philosophical theory which has been used specifically within the discipline of education to provide an explanation for the play of social and educational objects in history. It makes three interrelated claims. The first of these is that if investigators are trying to understand the psychology of a human being, they should not be concerned with what is in the person's mind but with how that person behaves. The second claim is that behaviours can be fully and comprehensively explained without recourse to any form of mental construct or event. The source of these behaviours is the environment and not the mind of the individual. And the third claim which behaviourists are likely to make, and which follows from the first two claims, is that if minded terms are used as descriptors, then they should be replaced by behavioural terms or, at least, those minded constructs should be translated into behavioural descriptors.

the process disrupt, conventional forms of understanding which serve to reproduce undemocratic, racist, sexist and unequal social relations. The task of critical pedagogy is to unmask and critique these ideologies, with the political and ethical purpose of helping to empower learners and, more generally, the social groups to which they belong. Unlike some postmodern viewpoints, critical pedagogy is predicated on a clear ethical position with regards to society and to the way society reproduces itself, although some versions of critical pedagogy emphasise the need to disrupt conventional school knowledge structures and the reproductive processes that accompany them, without specifying alternative frames of reference for learners. The end point becomes the disruptive process, rather than the re-forming of schooling and society in a particular way.

A particular iteration of sociocultural or constructivist theories is cultural-historical activity theory. That there now is a three-generation model of cultural-historical activity theory is part of its formation as an established theory (see Engeström, 2001). This and each generation of activity theory can be understood in two distinct ways. The first is in terms of its historical trajectory, so it is possible to understand a theory of mediation as a reaction against what it emerged from, that is, it sought to replace the stimulus-response model of the behaviourists because it became apparent that there were aporias, gaps, contradictions and muddles in the theory itself (in short, the theory was inadequate); or it can be understood as an attempt to frame the concept as a universalising category. Both of these versions have meta-theoretical and thus universalising elements, insofar as the first requires a theory of history and the second requires a theory of social psychology. However, these universalising elements are framed in different ways.

Cultural-historical activity theory (CHAT) studies were inspired by Lev Vygotsky,[134] and as their centrepiece had the well-known triangular model of subject, object and mediating artefact. When people engage in a learning activity (and in a sense this constitutes the principal activity of consciousness and apperception), they do so by interacting with the material and discursive world around them. What they are doing is entering into a social practice, which is mediated by artefacts. This needs to be qualified: there cannot be an unmediated practice – for example, a discursive practice cannot be atheoretic – and that, as a consequence, it is not possible to have direct access to the practice itself. Indeed, it is difficult to understand the idea of a practice which is separate from the

[134] See Vygotsky (1987).

way it is mediated for us. For Vygotsky, our contacts with people and their environments are mediated by artefacts, such as physical tools, technologies or social norms. This in turn led Vygotsky to a preoccupation with the notion of meaning, and thus to the development of a notion of semiotic mediation and, in particular, to a rejection of the behaviourist paradigm, which posited a passive object-to-subject relationship.

Learning can be seen as adaptive rather than transformative, and Vygotsky's work has always been associated with the latter rather than the former. However, the notions of adaptation and transformation are complex. The idea of adaptation would suggest that what is learnt conforms to those sets of behaviours, norms and strategies which constitute the social world, and which are external to the learner. The learner enters into a state of equilibrium, so that what is inside the mind of the learner (this changes) is now synchronised with what is outside the mind of the learner (which has not undergone any change at all). On the other hand, a transformative approach would suggest that both the mind of the learner and the object in the environment have changed. What this implies is not that one theory is misguided and should be replaced by another – a better account of a practice – but that there is a need to build into the theory being developed the possibility that some learning is adaptive and some is transformatory.

The fourth curriculum tendency is interpretivism. Those studies that broadly fit into this framework understand the curriculum from a phenomenological or ethnomethodological position. This framework sought to emphasise the role of interpretation and human volition in both understanding the curriculum and in projects of implementation.[135] It is directed in the first instance to the things in themselves that are the objects of consciousness. This entails a learning methodology which foregrounds subjective experiences and understands them in their own terms, both linguistically and conceptually, while at the same time treating these two modes separately. This presupposes that the experience of others is accessible to us, even if with the greatest of difficulty. And this points to the break with behaviourism that phenomenologists generated. Whereas behaviourists were concerned above all with the behaviour of individuals and eschewed the inner workings of

[135] Phenomenology is a meta-philosophy that focuses on the three key aspects of learning: the relationship of the individual to and with the world involving a process of change, the subsequent conception and activation of being in the world, and how our descriptions, words, schema and theories can provide us with some purchase on that world. The focus is on the givens of immediate experience, and this is an attempt to capture that experience as it is lived, both by the individual and by the external observer. See Husserl (1913; 1973).

the mind, phenomenologists understood behaviour and consciousness as essential to any theory of learning. They are different aspects of the same phenomena; the world as it is lived by the individual, and as it is known by that individual and others.

Governments round the world, and coordinators and curriculum developers of systems of education at the end of the twentieth century and in the early part of the twenty-first century, with a few notable exceptions, have reached an agreement about the nature of the school curriculum, learning approaches and assessment practices. This consensus now operates at all levels of education systems, and it can be expressed in terms of a number of propositions: traditional knowledge forms and strong insulations between them need to be preserved; each of these knowledge forms can be expressed in terms of lower and higher level domains, and the latter have to be taught before the former and sequenced correctly; knowledge can be construed in behaviourist terms; certain groups of children are better able to access the curriculum than other children, and, as a result, a differentiated curriculum is necessary to meet the needs of all school learners; the teacher's role is to impart this body of knowledge in the most effective way, and, consequently, their brief cannot concern itself with the ends to which education is directed, but only the means for its efficient delivery; and the school's role is to deliver a public service that meets the targets set for it by governments and other such educational systems. Intelligence is another key concept in a genealogy of curriculum and learning.

Intelligence

An intelligence quotient (IQ) is designed as a measure of human intelligence, with this notion of intelligence understood in relation to how it can be measured. The idea of an intelligence quotient was first used by William Stern (1916) in his book *Der Intelligenzquotient als Maß der kindlichen Intelligenz, insbesondere der Unternormalen* ('The Intelligence Quotient as a Measure of Intelligence in Children, with Special Reference to the Subnormal'), and he used it as a scoring method for categorising the concept of intelligence. Originally, a score was obtained by dividing a person's result on an intelligence test, expressed as a 'mental age', by the person's chronological age, both of which were expressed in years and months. This fraction was then multiplied by 100 to obtain an IQ score. In contemporary IQ tests, the raw score obtained from a test is translated into a normal distribution with a mean of 100 and a

standard deviation of 15. The claim is then made that 66 per cent of the population has an IQ between 85 and 115, and about 2.5 per cent has an IQ above 130, with a similar number below 70. All these estimates, in early and later versions of the intelligent quotient, are unidimensional in conceptual terms, and methodologically reductive (see Chapter 6 for a discussion of the notions of the average, distributional properties of objects and probability).

Intelligence as a category can be traced genealogically. For example, Francis Galton made a first attempt at creating a test for rating a person's intelligence, which also comprised a determination of what intelligence is. He suggested initially that there was a relationship between reflexes, muscle grip, head size and intelligence (Galton, 1883), a theory which he later abandoned. His work formed the basis for the development of psychometrics – the application of statistical methods to the study of distributional traits and hereditarian framings of human behaviour. Alfred Binet, Victor Henri and Theodore Simon developed this theory of intelligence by producing a specific test, which focused on verbal ability. This became known as the Binet–Simon test.[136] As with all conceptual development of this type, it consisted of unidimensional categorisations, semantic reductions and simplified inferential relations. Verbal ability had to be defined in such a way as to fit both the theory underpinning it and the methodology of its application. In this test, a 6-year-old child who was able to perform tasks associated with a normal 6-year-old child would consequently have an intellectual age commensurate with her chronological age. Henry Goddard published a translation of it in the US in 1913.[137] In 1916, Lewis Terman at Stanford University revised the Binet–Simon scale, and this became known as the Stanford–Binet Intelligence Scales.[138] It was widely used.

Each of these early IQ tests focused on different aspects of the human mind and body, such as visual capacity, verbal dexterity, abstract reasoning, numeracy, vocabulary or general knowledge. Charles Spearman in 1904, before the development of the Stanford–Binet Intelligence Scales, argued that there were correlations and associations between the results on the different tests for these different attributes. For example, he suggested that children on unrelated school subjects performed equally well across the curriculum or equally badly. This prompted him to suggest that underlying these similar performances

[136] See Fancher and Rutherford (2016).
[137] Goddard (1913).
[138] See Holden and Tanenbaum (2023).

on separate tests was a notion of general ability or general intelligence. Spearman (1904) called this *g* or the general factor, reserving for task-specific activities the *s* signifier. His understanding of an IQ test was therefore that it measured *g* by making the assumption that this composite score was composed of the highest correlations with all the *s* scores. Although this concept of general intelligence was common currency, here Spearman had given it a formal imprimatur.

In the US, where much of the early development of IQ testing took place, during the First World War, the Army decided that they needed to be able to assign recruits to different tasks, such as command, provision, strategy and the like. Robert Yerkes,[139] working with Lewis Termin and Henry Goddard, reworked the Stanford–Binet Intelligence Scales so that, as they thought, they were able to screen men for officer training and other functions within the army. In total 1.75 million men were tested – issues of invalidity, racial bias, conceptual variability and cultural incompatibility were conveniently ignored or circumvented. In addition, we have here an example of reducing an evaluation of a complex set of attributes and behaviours to a simple word or phrase outcome: that intelligence was heritable and innate, and could be expressed as a single number, and consequential, in that no man who recorded below a C on their intelligence test could be considered for officer training. Another example of this is Ofsted inspections in the United Kingdom in the early part of the twenty-first century, where the evaluative categories were reduced to 'outstanding' or 'good' or 'requires improvement' or 'inadequate'. There are many other examples of this reductive categorisation in the world (see Chapter 7).

Louis Thurstone, working immediately after the First World War in the US, while still acknowledging the possibility of a notion of general intelligence, argued for a model of intelligence that had seven elements (verbal comprehension, word fluency, number facility, spatial visualisation, associative memory, perceptual speed, reasoning and induction).[140] The concept was now being expressed as a series of actions, that is, functionalities in the world: understanding what other people are saying, being able to describe in words what one is experiencing, thinking in three dimensions, remembering things, speed of thought and response, providing reasons for thoughts and actions, and making inferences between disparate thoughts and actions. The point is that in slow and incremental ways, the meaning of the concept was being tied to the

[139] See Yerkes (1921).
[140] See Anderson (1992).

way it could be tested. David Wechsler produced his own version of the Stanford–Binet test in 1939.[141] One of its principal characteristics was that instead of reducing all the data to a single descriptor, it now identified a range of reporting items. These were in the main verbal abilities, with non-verbal abilities relatively neglected.

This concept of intelligence, in the form that it has acquired or is acquiring, has consequences. In the case we are considering here, the genealogy of the intelligence quotient, intelligence took on a eugenicist and biologically determined meaning. Henry Goddard was a eugenicist. In 1908, he published his own version of the Stanford–Binet test, which he called the Binet and Simon Test of Intellectual Capacity, signalling in the title itself his intent to delimit and reify the concept of intelligence. Goddard specifically related feeble-mindedness[142] to performance on the test which he had helped to develop. He further argued that this trait was hereditarian in origin, and that feeble-minded people should be prevented from giving birth, either by reproductive isolation or sterilisation processes. Some of the states in the US adopted sterilisation policies, with the consequence that over 60,000 people were sterilised in the 1930s. Later, new methods of selective reproduction were introduced, making connections between intelligence and genetic heredity.

Raymond Cattell in 1941 further revised the concept of intelligence to incorporate notions of revision and specialisation.[143] He divided intelligence as a concept into two types: fluid intelligence, which consisted of solving problems by reasoning, and crystallised intelligence, which was defined as a static and propositional capability. Much later, John B. Carroll re-evaluated Cattell's findings and produced a hierarchical model with three levels.[144] The bottom level consisted of basic abilities, such as spelling, addition and the like. The middle level consisted of process abilities, such as induction and retroduction. The top level consisted of a notion of general intelligence, very much like Spearman's *g*. The concept of intelligence was now being specialised, reified and hierarchised. In addition, the concept was being framed as a genetic property. This enframing consisted of a series of knowledge claims: the brains of some people seem to be more efficient than those of other people; there is a neurological basis for this claim, in that specific genes that have been identified have been shown to generate cellular properties associated

[141] Wechsler (1939).
[142] See Goddard (1927).
[143] Cattell (1941).
[144] Carroll (1997).

with intelligence; and these cellular properties have been found to be more in abundance in people who have been deemed (through behaviourist methodologies and inferences from observations of human beings) to be more intelligent.

Testing for the intelligence quotient was also undergoing substantial change. These various tests or iterations of the original test contributed to the way the concept of intelligence was developing, how it had been understood, how it was now understood and, fundamentally, how it was being used. The most commonly used IQ tests are the Wechsler Adult Intelligence Scale (WAIS) for adults and the Wechsler Intelligence Scale for Children (WISC). Clearly there are particular difficulties in assessing the intelligence of very young children, and because of this the Bayley Scales of Infant Development were developed in 1969 for children under 2. These are used in adapted form by health visitors today, at children's 2-year checks, for example, and a typical task might be building a tower from three cubes. There has also been widespread use of another test, the British Ability Scales (BAS). This was designed to measure development and moral reasoning, and to be less US-centric. Other commonly used tests are the current version of the Stanford–Binet Intelligence Scales, the Woodcock–Johnson Tests of Cognitive Ability, the Kaufman Assessment Battery for Children, the Cognitive Assessment System and the Differential Ability Scales. Intelligence as a concept and as a practice was being reconstituted, as were the relations between intelligence and learning. The concept of validity can also be genealogically reconstructed.

Validity

We can look at the development of the notion of validity over time, understanding the history of this concept not as a set of sequential improvements on the original idea but as changing manifestations of a powerful concept. The earliest conceptualisations of validity were of a static property, which could be assessed in a unidimensional way, usually as an index of test scores against a single criterion.[145] These were underpinned by an empiricist and positivist philosophy of science and a psychometric theory of testing. Validity was conceived as a construct which examined the test score of an individual against a criterion measure or

[145] See Binet (1905), Pearson (1896), Binet and Henri (1894), Spearman (1904).

measures. This measure was thought of as the value of an attribute of the individual, which was assumed to be monosemic and definitive. The assessment itself was then understood as an accurate estimation of this attribute or disposition. Later, this notion of validity was reconceptualised to include a future dimension with regards to the proposed criteria and its contents, and therefore to its semantic formation. Validity under this conception comprised ideas of criteria-referencing, criteria-content and semantic construct. This criteria-based model was further enhanced by the addition of a notion of use-value,[146] which was subsequently divided into two types or dimensions: concurrent validity and predictive validity. Concurrent validity referred to estimates of the relationship between actual test scores and criterion constructs, whereas the separate category of predictive validity was intended to locate assessment within a notion of subsequent performance – it was future-oriented.

The emphasis on concurrent and predictive validity gave way to an emphasis on the validity of the content of the criteria that the individual was being assessed against. It comprised an account of all the content items in the test – whether they were comprehensive and relevant to the construct being measured of the individual. A further refinement was introduced by Samuel Messick (1989), when he suggested that it was legitimate to extrapolate from a sample of the assessment items being assessed to a generalised notion of the construct itself, mirroring the debates in the field of intelligence testing between specialisation and generality, as in Spearman's notion of *g*. This was only sanctioned if sampling errors were eliminated. The emphasis was shifting from the validity of the constructs to whether they could be tested or not in a safe way. There were additional problems with this idea of content validity, such as that validity of item and generalisation was difficult to achieve within the confines of a psychometric testing regime, with its unidimensional notion of what a construct was – in some cases, judgements by experts were considered to be adequate grounds for this construct determination. The emphasis then shifted to a notion of construct validity.

Attempts were made to formally define it, for example, the claim was made that it could be understood as the extent to which the individual possesses some hypothetical trait or quality. Here psychometricians were introducing a retroductive criterion for determining validity

[146] So, for example, Edward Cureton (1951: 38) argued that 'the essential question of test validity is how well a test does the job it was employed to do'. For Cureton (1951: 38, his italics), validity could be understood as 'how well the test serves the purpose for which it is used … and it is defined in terms of correlations between the actual test scores and the *true* criterion scores'.

(of construct and not of testing for it) – the method that was employed was retroductive insofar as the nature of the construct was developed from the performance of an individual on a test, and not from any other source. The problem is that a test such as this can only be constructed with a set of criteria in mind, and the determination of these criteria are external to the test itself. Retroductive notions of construct validity were swiftly replaced by attempts to link assessment performance and preconceived theoretical explanations. Two new concepts were introduced at this stage in the genealogy of the concept: convergent validity, where this form of validity was constructed by making a comparison with other tests purporting to measure similar constructs, and discriminant validity, which was understood as the extent to which the test did not correlate with other measures. All these efforts at developing a notion of construct validity were hamstrung by the psychometric nature of the exercise, and by the insistence that constructs had to be formulated in testable terms. One last attempt at breaking through the ironclad carapace erected by psychometrics was an attempt by Messick to understand what the construct was, not only in terms of the way the construct was valorised, but also in terms of the social consequences of using it in the world, and the actions that resulted from these inferences. Validity with its ever-changing qualities is an epistemological construct, and it constitutes a learning configuration in its own right.

Learning configurations

A learning configuration consists of discursive and material objects, object-relations and other object-configurations joined together and persisting over time. With regards to learning as a concept and as a practice, it is possible to identify seven such configurations that we can give names to: experiential, representative, technical-rational, transmissive, reflexive, epistemic and transgressive. We are dealing here with apperceptive and conceptualising processes, with distinctive stages or parts – from particular object to sensation, to learning, to thought, to configuration of thought and so on, with changes being made at each stage to the particular object going through the process. There is also another process that we can give some linguistic shape to, and this is the reverse of the apperceptive or conceptualising process described above – from configuration of a thought, to a thought, to a learning instance, to a particular object. And further to this, we can say that some minded objects or objects-in-the mind do not have a direct relationship with

the outside world in the first instance, although, in the second instance, they may influence discursive objects, languaged objects, even material objects, although even here we are pointing to certain things in the world rather than saying what they are.

As we have seen, the learning dimension of the process can be understood in a variety of different ways: as an access point to the mind of a person; as a part – an essential part – of a change process; semantically, as a valorised or valued object in the world that can be positioned in contemporary fields of valorisation; epistemically, where sensory input is received and transformed in the mind (and conversely where thoughts or ideas are transformed praxically); as a modality or expressive trope; as an evaluative marker or descriptive category; as being in all its essential aspects an ethical and normative desideratum; as the defining element of a *Bildung* or *Bildungstheorie*; as a minded capacity; as having transcendental qualities; as being beyond human capacity, and more.

Experiential learning, focusing on experience above all else, was a reaction against the idea that the unit of experience was self-contained, episodic and self-generated, and it led to new pragmatic, semantic and phenomenological pictures of the world. These models of learning, then, rather than understanding experience as an input, a precursor, to learning, conceptualised having an experience as the process of learning in itself. In addition, they were more successful at incorporating into their worldview and their view of learning, human processes of intentionality, volition and agency.

A representative learning configuration is underpinned by a particular view of world-to-mind and mind-to-world relationships. Representationalist theories of mind identify an inner realm of representations and an outer realm of objects in the world, which are placed in some form of identity relation. Learning is understood as the making of (and then expressing in language) true and correct pictures of the world, which have already been formed outside of the person's mind and are independent of that mind's conception or understanding of them. If we reject this approach, the focus of our work should be the relationship between the two.

Technical-rationality learning configurations bypass contemplative or reflexive processes, and treat knowledge, that is all knowledge, as a set of technical issues, as problems to be solved without recourse to theory or experience. Theoretical knowledge is floated off into a context-free vacuum, the matter of knowledge is detached from its locating background, and researchers, knowers and learners are cast as ideal

knowing machines who can know the world only by being outside it, even though they still seek to control it.

A transmissive learning configuration uses traditional pedagogical methods, and its purpose or aim is the transmission and subsequent assimilation of pre-existing knowledge, theories, strategies and models. This approach is therefore non-reflexive and deagentising. Apperceptively, it understands world-to-mind and mind-to-world processes as unmediated and assimilative. These theories of learning identify the basic mechanisms of learning in terms of the representation and storage of information.

Reflexive theories of learning or learning configurations internalise the processes of learning. Reflexivity is about exploring how meanings, including the meanings given to, and generated by, learning activities, are discursively constructed within apperceptive and conceptualising processes. This is a notion of reflection, or even reflexivity, which is a way of saying that a human being can be disposed to reflect back on itself. Margaret Archer (2007) identified four types of reflexive action. The first of these is what she called communicative reflexivity. Here, the life of the mind is characterised by an internal conversation that is a part of the whole process of learning. The second type of reflexive action is what she called autonomous reflexivity, and here the processes of the internal conversation are foreshortened and may be automatic and involuntary, insofar as they lead to actions. The self-referential conversations have taken place in the past; the externalisation process is given emphasis. Then there are meta-reflexive processes, in which the principal focus is the internal conversation; interiorisation and exteriorisation processes are neglected. The purpose is for one part of the mind to interrogate other parts or contents of the mind, to be, in other words, critically reflexive. This is an internal process, although there may be consequences in relation to future actions. Finally, Archer suggested that there may also be fractured reflexive processes, in which the interrogation by one part of the mind of another part does not proceed smoothly and coherently, leading to distress and disorientation.

Epistemic learning configurations are central to the work that I am undertaking in this book. There are three sites of knowledge (to use a spatial signifier): the world and its contents (Immanuel Kant's noumena),[147] the mediating arena between the contents of the world and objects in the mind (this is what we might want to call learning sites,

[147] See Kant (1992a; 1992b; 2007). This is one reason as to why we should consider learning to be an important hinge or foundational concept.

which are also contentful), and the contents of the mind that allow us to make judgements, perceive the world and reflect on what we have perceived (Kant's phenomena).[148] To separate out these three sites is itself to make a judgement about the contents of the world and how we can access them. It is also to make a claim that there are always non-conceptual external constraints on what we perceive to be the contents of the world – we cannot make limitless claims about its contents because the world does not allow us to do this.

There can be no definite conceptualisations of transgressive or critical learning because transgression itself entails a subversion of rules, categories, types, contexts and connections (object-relations) and borders between objects, object-configurations and people. Transgressive learning can be understood as a set of contextually diverse techniques and practices that aim to bring about change in social, political, economic, categorical and epistemic arrangements and frameworks (see Chapter 11).

Two of the most important (affirmed subsequently) learning theories, symbol-processing and situated-cognitive approaches, allocate distinctive roles to learning perspectives, assessment practices and meta-cognition. Symbol-processing approaches understand the learner and the environment as separate; learning takes place within the human mind as the individual processes information they receive through their senses, assimilates that information and creates new ways of understanding. This positions the individual as a passive recipient of environmental influences. It separates out mind from body, language from reality and the individual from society. Situated cognition understands the relationship between the individual and the environment in a different way. Situated learning approaches view the person and the environment as mutually constructed and as mutually constructing. This is a process of dynamic modification rather than static matching. The learner acts with and on the environment, shaping or modifying herself and, at the same time, shaping or modifying the environment. Situated cognitivists give prominence to active, transformative and relational dimensions to learning; indeed, they understand learning as contextualised.[149]

This has led in turn, principally through Donald Schön's (2005) critique of technical rationality, to an emphasis on reflection and

[148] I have repeated these remarks about learning and learning sites at various points in the book to show that learning is an epistemic activity, and an essential part of apperceptive and conceptualising processes.
[149] See Bredo (1999).

meta-reflection within the context of a learning community, in contrast to theories of learning that understand the learner as a passive user of information from their environment. Schön's well-known distinction between reflection-in-action and reflection-on-action is central to his understandings of learning and pedagogy, and although this in the first instance is focused on professional and workplace learning, it has implications for learning in formal settings such as schools, and, indeed, for all types of learning as well.

Schön suggested that most of our knowledge as it relates to action, or knowledge-in-action, is implicit. It does not involve conscious processes, so that actions, recognitions and judgements are skilled activities, which are not thought about before they are performed. Equally implicit is the knowledge we have about the background, the history and the social embeddedness of the respective practice. This leads to an acceptance that professional or everyday actions are basically problem-solving activities where reflection and existing tacit knowledge is applied to emerging problems. Schön, however, argued that this widespread understanding of professional practice is too limited and has to be extended to problem setting, a second-order, more complex, form of reflection, where we also consider wider concerns and implications of the problem, including, for instance, institutional, political and social structures, which are external to the specific knowledge-development process, but which impact on it (see Chapter 9).

Reflexivity and conscious analysis become even more necessary when we are confronted with new situations and, as a consequence, have to change or acquire new practices. Although we might perceive the new situation to be unique in the first instance, to make sense of it requires fitting it into existing frameworks of rules and resources. We do this by looking for similarities and differences. Schön understood the process of learning as cyclical, with successive iterations of comparing new and familiar experiences with well-established routines of thinking, many of which the learner may have difficulty with bringing to consciousness.

In all learning situations, however, we also interact with and act upon the environment, and attempt to make sense of it in an experimental fashion that involves the following non-sequential processes: exploring the possibilities inherent in the problem; developing a series of action steps; testing them out to see if they fit the problem; and evaluating the more successful solutions in order to develop working hypotheses. Experimenting in practice, then, is both reflective and transactional. We are at the same time testing out new hypotheses and seeking to change the external setting in which the problem

is embedded. This is a process of reflection-in-action with different degrees of complexity and reflection-on-action, where we have to be encouraged to experiment with and explore new practices, contents and procedures embedded within their actual contexts, and to think about their relevance, usefulness and viability. Reflection however, can be greatly increased through collaborative meaning-making, dialogue and discussion between different people, who generate alternative perspectives, ideas and experiences. The exchanges between them add a further level of reflexivity to the learning experience, namely, reflection on reflection-in and on-action.

The model of workplace learning presented here therefore encourages us to find appropriate and justified ways to apply the acquired knowledge in our own practice setting. To this end, it brings together three types of knowledge, namely, the accumulated experience-based and context-specific knowledge we hold, external practical and theoretical public knowledge which might serve to frame, support, structure, illuminate or (critically) challenge existing contours of knowledge, and new knowledge created by other people. For Schön, knowledge that is underpinned by a technical rationality model fails to take account of the context-specific nature of knowledge acquisition. Schön himself was criticised, in turn, for not developing a critical approach to knowledge (see Chapter 11), and for in the end downplaying the complexity of the epistemic and learning arrangements he was advocating.

Genealogies

I have been concerned in this chapter with the concepts and practices of curriculum, validity, intelligence and learning. I have focused on the way these four concepts have changed in form and appearance, and, in particular, on how this has affected their historical, archaeological and genealogical connections and relations. In the first instance, I need to consider how these three types of event-methodologies, that refer to events in the past and in the present-past, can be distinguished from each other. Historical, archaeological and genealogical methodologies are framed by time, although this core category is construed differently in each of them. A further shared element is that they produce configurations of discursive objects, such as experiential, representative, technical-rational, transmissive, reflexive, epistemic and transgressive learning frames. These discursive object-configurations are understood in different ways, historically, archaeologically and genealogically. The

key, then, to understanding what they are lies with the types of relations that exist between objects in their formation and reformation.

Archaeology is the term used by Michel Foucault (1970, for example) in his earlier writings to describe his approach to history and writing history.[150] This approach focuses on the discursive trace-objects and object-arrangements (the order of things) left from the past, which enable us to write a history in the present-past. He contrasted this with a genealogical approach.[151] Although there are some confusions in his later work about the differences between the two modes of historical theorising, this approach is designed to critically interrogate belief-formations by attempting to explain the scope, extent, breadth and totality of discourses that are in existence. Both of these approaches are historical in a conventional sense, in that an event, a discursive or material happening, or a configuration relating to either of these, has occurred prior to other object-events, objects and configurations of objects. There is a temporal order between these objects.

Foucault revived the notion of genealogy as it had been used in the past, and, in particular, developed the idea from the one used by Friedrich Nietzsche in his *On the Genealogy of Morality* (1998).[152] Foucault's principal concern in his *Les Mots et Les Choses* (1966) (in English, this is sometimes translated as *The Order of Things*, with a subtitle of *An archaeology of the human sciences* [Foucault, 1970]) is to offer an account of how knowledge over the ages has changed, and the implications this has for practices such as psychiatry and clinical medicine, and disciplines such as economics, biology and philology. I have pointed to, in this chapter, historical, archaeological and genealogical ways of thinking, which operate at particular time-moments in history concerning the concepts and practices of learning:

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[150] Michel Foucault focused above all else on writing a history of the present. In his later writings this became a critical history of the present, or, as I am calling it, the present-past. He described his archaeological method as a history of thought, and not a history of ideas, and he did this because he wanted to uncover the discursive traces of distinct historical periods, each with their own types of truthful statements and orders of discourse (internal and external).

[151] Michel Foucault understood the genealogical method as being qualitatively different from the archaeological method, although there are traces of each in the other. The archaeological method focused on structural order, difference and discontinuities between the past and the present-past. The genealogical method tried to show descent and emergence, and the continuities between the past and the present-past. The differences between the two are not clear-cut. The point about a genealogy of knowledge as opposed to an archaeology of knowledge is to include within it elements of power and its many variations in the construction of knowledge and understanding.

[152] Michel Foucault acknowledged his debt to Nietzsche, and especially to Nietzsche's (1998) *On the Genealogy of Morality*. The commonality in their works lies in the subject matter of their concerns: the disunity of the subject, powerful practices, continuities and discontinuities in history and experimentation.

experiential, representative, technical-rational, transmissive, reflexive, epistemic and transgressive formations. We might want to call them *Weltanschauungs*,[153] or universal-views, held by a community in place and time – discursive configurations that are in history. Having said that, it is important not to overvalue, and thus exaggerate, the efficacy of the properties of these historical configurations, and especially the property of absolute reach or ambit.

An example of Foucault's (1970) use of the archeological method in *The Order of Things* is his account of the notion of representation, although this account also has genealogical elements. This is an archaeological account of an object in the world, in this case, a discursive object and a discursive object-configuration. There is a historical element in his description of the discursive object, and this therefore implies that the one gives way to the other. However, the process of transformation from one discursive configuration to another cannot be characterised as occurring at a particular time point, as it is sometimes portrayed in popular histories. This in turn has implications for theories of how we can and should construe the relationships between mind and world, mind and body, and structure and agency, which are central to how we understand the world. Michel Foucault understood this all too well.

According to Foucault, the transformative process of a discursive object such as representation had three distinct stages or levels. In the pre-classical age,[154] the concept of representation was understood as the employment of ideas to represent the object to which it referred. Knowledge was thought of as resemblance – the idea in the mind resembled the object it was seeking to represent. This pre-classical age gave way in time to what has been described as the classical age, a body of thought and thinking that was qualitatively different from what there was before.[155] Again, we must be careful not to subscribe to a belief that this was how everyone in the world understood the relationship between mind and world. This *Weltanschauung* is a discursive object-configuration, which had its being in the mind, and had implications for how people lived.

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[153] The need to use a German word, *Weltanschauung*, here is because there is nothing in English that fully covers all the various meanings that attach themselves to it.

[154] The pre-classical age is ill-defined in the work of Foucault, but certainly embraces the European Renaissance and much more besides. This problem of historical definition points to the need to reaffirm the idea that archaeological and genealogical time points are not and cannot be definitely set.

[155] Again, the classical age can only be loosely identified. It would, however, include the European Enlightenment and more than this.

In time, a new discursive formation developed, but not as a part of a preset pattern or ineluctable process. Whereas the pre-classical age understood the relationship as one of resemblance between things or objects, now representation was understood as a bridging mechanism between mind and world, and as an abstract structure which underpinned knowledge of what was in the world and to which it made reference. The classical view had to confront the difficulty of determining what an adequate representation of an object, such as learning, might be. This cannot be achieved by arguing that we can know the object by separating it out from its representation in the mind, because this would preconfigure what we are attempting to describe. The only way that we can answer the question of what an adequate representation might be is through an external notion, that it gives a 'clear and distinct perception',[156] or that it is a simple impression.[157] The classical theory of representation, then, is that of abstract qualities in the mind, and these are representations of what is out there in the world. Furthermore, because these abstract qualities were not thought of as being causally efficacious, they were not able to influence what was there in the world, and thus language and languaging could not have a fundamental role in the development of the mind and in the development of the world.

The classical era, in its turn, gave way to what Foucault described as modern philosophy,[158] and the story takes us to and beyond Kant's rejection of classical representation, although we should be careful not to position his critique as a specific historical event. Kant wanted to reject altogether the idea of representation as an appropriate descriptor of the mind–world relationship, and to replace it with something other than representation. He suggested that some thoughts or abstractions were themselves the product of processes that belonged to a specific epistemic order of the mind, and he called this transcendental subjectivity.[159] This is an example of the idealistic tendencies that he has been, and

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[156] Clear and distinct perceptions for Descartes (1988) are such because they are perceptions that prove to be self-evident. In other words, they cannot be doubted, although here doubting is being understood in a Cartesian (this is to be expected) and not in a Wittgensteinian sense.

[157] Hume's (2000) notion of simple impressions has a very similar meaning.

[158] Foucault argued that the fundamental turning point in history for the modern period occurred with the publication of Kant's *Critique of Pure Reason* in 1781, although this seems to be somewhat early in the history of thought.

[159] Kant's (1992b) notion of transcendental subjectivity has two dimensions. In the first case, there is what Kant referred to as the empirical self, and, in the second case, there is the transcendental self. This is an attempt by Kant to suggest a theory of subjectivity, which is not impersonal, scientistic and atomistic. It is rooted in his idealist perspective, with subjectivity being another idea of the absolute.

continues to be, criticised for.[160] Kant opened up the possibility that all knowledge was essentially historical, and consequently could only be applied to particular and specific communities of knowers. This thought and injunction thus paved the way for the emergence of Nietzschean, and indeed Foucauldian, postmodernist and post-structuralist idealistic views of the world, and especially those that referred to the key relationship that concerns us here: the relationship between mind and world, and to the key concept that we have been concerned about in this book, that of learning.

In *The Order of Things*, Foucault (1970) understood this post-classical or modernist notion of representation through the reinstatement at a conceptual level of the importance of language and linguistic systems. In the classical age, human beings were thought of as the site for knowledge because they have in their minds those ideas that represent what is in and of the world. Foucault (1976, for example), writing as a modernist, went on to disabuse us of this notion of a transcendental human being. This was because of, what he called, the 'finitude of man' (*sic*), and the 'analytic of finitude' (Foucault, 1976) that is attached to it. In the modernist era, some philosophers tried to compensate for this by grounding human beings in natural processes, substances or viewpoints. In its Romantic iteration, we have an attempt at naturalising human beings, to, in effect, explain and justify knowledge and learning in terms of natural processes and as being in conformity with what already existed in nature. If we put this to one side, knowledge and learning, we might want to argue, has social, economic and political consequences and implications.

[160] See Strawson (1959).

9

Social, economic and political categories of learning and knowledge

In this chapter, I will address the social, economic and political assumptions and propositions of knowledge and learning by examining a number of key concepts – equality, gender, race, dis-ability, intelligence, sexuality and social class – which embody our social and political arrangements. Each of these key concepts, then, has to be understood as part of a conceptual-dispositional holistic framing. A critical realist or conceptual-dispositional framework comprises an argument for the existence of an external world, which is independent of our minds, and that we can only know it, and what it is (its contents), if we can know it at all, through some form of conceptual framing or worldview (a *Weltanschauung*) (see Chapter 1). What follows from this is that our conceptual frameworks, perspectives on the world, and descriptive languages interpenetrate what is being called reality to such an extent that it is impossible to know what an unschematised world is like (see Putnam, 1990). We can never know the thing-in-itself (*Ding an Sich*),[161] including those striations and divisions that structure the world and are not just in individual minds or language structures. How do we then characterise a world that we can only know through prior categories and divisions, and consequently how do we subsequently describe the world-to-mind and mind-to-world set of relations? Here is a triadic rendition of it. There are three sites of knowledge: the world and its contents, the mediating arena between the

[161] See Kant (2008, §32). In his doctrine of transcendental idealism, Kant argued that the empirical world is a complex of appearances which are instantiated in our representations: 'And we indeed, rightly considering objects of sense as mere appearances, confess thereby that they are based upon a thing in itself, though we know not this thing as it is in itself, but only know its appearances, viz., the way in which our senses are affected by this unknown something.'

contents of the world and objects in the mind where learning takes place, and the contents of the mind that allow us to make judgements, perceive the world and reflect on what we have perceived. In differentiating between these three sites, I am suggesting that the relationship between knowledge and the world is mediated or conceptualised, and that, as a consequence, we can only see the world, and we can only operate in the world, through a particular lens or discursively, for example, through a particular configuration of all the relevant objects, object-relations, and institutional and configurational objects (including other people) that constitute learning as a concept and as a practice.

Categories, orderings and boundaries between objects, object-relations and object-configurations are central elements in any social theory, and especially in a philosophy of dispositional or conceptual realism. One argument in favour of differences between natural and social kinds is that social kinds depend on our attitudes towards them, whereas natural kinds do not. Attitude-dependent kinds are called by Searle (1995) institutional kinds, although this does not and cannot differentiate between discursive, material, relational, configurational and person-oriented kinds, with institutional kinds usually thought of as configurational (discursive or material).[162] Another argument is that natural kinds are non-conceptually based, whereas social kinds are concept-dependent. A third argument is that natural kinds are enframed in physicalist meta-theories, whereas social kinds are enframed by intentionality, reasons and reason-giving strategies (see Chapter 1).

The most important issue is the existence, status and nature of social, and, in particular, learnt entities – since this is my principal focus in this book – using this last term to point to objects which are different from other objects. We can perhaps concentrate on three category-types: social facts (for example, the fact or fact(ing)[163] of capability distributions), social kinds (for example, the existence of more and less intelligent people) and social groups (for example, school or university communities). Social facts such as the issuing of examination certificates enable those who have been successful to acquire certain types of goods,

[162] In his book *The Construction of Social Reality*, John Searle (1995) suggests that many institutional categories are coextensive with what I have been describing here as social categories. For Searle, natural entities are associated with social entities and properties through status functions. A status function specifies the relationship between a social entity (a status) and a natural entity. Furthermore, statuses are only real because they have been collectively endorsed by a community.
[163] The word 'facting', a derivation from a fact, is being used here to indicate an activity where a person gives credence to a truth-carrying proposition by referring to it as natural and therefore beyond dispute or discussion (see Chapter 3).

and these facts are understood as being in the world and about the world, rather than being representational entities in the mind (although they do have symbolic and discursive meanings attached to them). There is a view that social facts are only credible by virtue of a sense of collective intentionality or minded actions involving a number of people. What this suggests is that binary categories, such as male/female, learnt/given, ability/dis-ability, intelligent/ignorant divisions and differences, and the like, are not natural or definitive divisions, but constructed categorisations (formed and re-formed by human beings in society) that allow certain types of political, economic and social arrangements. An extreme version of this argument is that there are no meaningful natural divisions or differences between social objects – similarities and differences between objects can only be attributed to the functioning of the relevant concepts, and not to any natural processes. Any activity in and about the world is dependent on a human being or human beings acting in the world, and this applies as much to concept-development as it does to other worldly practices.

Equality

Equality as a concept is polysemic. It can be understood as a process of equalising, in an active and praxical sense, and it can be thought of as a disposition. It can signify correspondence between different material and discursive objects, material and discursive configurations and persons, and in relation to particular features of these objects. In this sense, it acts as a counter to difference or differentiating. To say that women and men are equal is not to say that they are identical, that is, no object or person can ever be completely equal to another, because if this were so, they would be identical.

Equality as a concept is closely linked to concepts such as justice and morality. If men and women are not being treated equally with regards to practices of female genital mutilation (deprivations of sexual pleasure with regards to women; the infliction of pain on the one, as a child usually, and not on the other, and the forced imposition of gendered roles for women and not for men), then we can say that these practices, and the practices that are attached to them, are immoral or unfair. Four types of equality, and therefore of justice, have been suggested: formal equality, proportional equality, moral equality and redistributive justice.

Formal equality is underpinned by two principles. The first of these is that unless we can determine that there are significant differences

between two people, then we should respond to both of them in the same way. The second principle of a formal discourse of equality is that we should only respond to people differently if we can find good reasons as to why they should be treated differently, and as to why they are different. It is therefore irrational to treat equal cases in unequal ways without sufficient reasons. John Rawls's (1971) theory of justice as fairness recommends equal basic liberties, equality of opportunity, and facilitating the maximum benefit to the least advantaged members of a society in any case where inequalities may occur. He set out two principles of justice: each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others, and social and economic arrangements are to be made so that they operate to the greatest benefit of the least advantaged and attached to offices and positions open to all under conditions of fair equality of opportunity. Two issues immediately arise: Why should we abide by a principle of rationality? And what constitutes significant difference?

Proportional equality is different because it adds another condition to the way we should treat other people, which is that we should treat all relevant people in the same way unless a case can be made that they in some way deserve a different treatment. Under this framework, if a human good or disposition, such as learning or goodness, is unequally distributed in a group of human beings, then members of this group should be treated in relation to certain dispositions that they have or that they have acquired, or that they do not have or that they have not acquired. The principle of proportional equality underpins a notion of social mobility. The most obvious problem with it is that it is difficult to determine in a fair way whether some people have a greater capacity or have used that capacity to achieve good ends. It is a theory of justice because it sets out a series of steps by which goods of all types can be distributed among a population.

Moral equality is a rights-based notion of justice that consists of treating everyone, especially men and women, equally. Everyone deserves to be treated with respect and dignity because they are human. This is a conception of justice which is substantive, universal and morally equivalent. In Kant's (2007)[164] moral philosophy, the categorical imperative is underpinned by an equality notion of universal human

[164] A moral imperative is a principle that compels that person to act. It is a kind of categorical imperative, as defined by Immanuel Kant (2007). Kant understood the imperative as an obligation of pure reason, in its practical aspect. Not following the moral law was seen to be self-defeating, and thus contrary to reason.

worth. Martha Nussbaum's (2000a; and see Chapter 10) central human functional capabilities is another example. However, recognising that all human beings are equal does not logically and categorically lead us to the view that we should treat all persons equally, as John Rawls (1971) was so concerned to argue.

Theories that limit themselves to the equal distribution of basic means, in the hope of doing justice to the different goals of all human beings, focus on means as opposed to what individuals gain with these means (Sen, 1985). The value that goods have for someone depends on the natural environment, and individual capacities. Hence, Amartya Sen proposes that we should distribute goods in relation to 'capabilities to achieve functionings', that is, the various things that a person can do or be (Sen, 1985). Evaluating individual wellbeing has to be tied to a capability for achieving and maintaining various functionings constitutive of a person, such as adequate nourishment, good health, the ability to move about freely or to appear in public without shame. On the basis of such a thick conception of necessary and universal elements of the good life, certain capabilities and functionings can be designated as foundational or universal. This is also fundamentally a communitarian philosophy. It includes a notion of difference and identity – what they are, and how they can be objectified.

Difference and identity

The key concept that I will be focusing on here is difference – the type and extent of dissimilarity between different manifestations of a category, such as abled and dis-abled, male and female, or intelligent and ignorant, and others. Crude versions of these relations are ever-present in modern societies. However, difference can be understood in a number of ways. There is the common use given to the term, where difference is understood as not being, or as being opposite to, something else. This refers to the idea that words and signs only have meaning within other arrangements of words and concepts, from which they differ. The second way is to refer to a notion of the force that differentiates social elements from other social elements, and in the process engenders binary oppositions and endlessly reiterated hierarchies of meaning.[165]

A companionate concept is personal identity, and this refers to the way a person identifies with a particular social object, such as a

[165] See Derrida (1978; 1982).

nation, a collection of nations, an ethnic trait, a racial classification, a geographical entity, a personal history, a sense of heritage, a sporting club, an abstraction such as goodness or love, a social unit such as the family, a religion or a sexual orientation. Whatever the social object, this identification comprises a preference for that object over other objects of the same type, for example, identifying with a particular racial grouping and not with human beings in general.

What is pivotal here is how a person constructs their personal identity – how they give more importance to one particular social object, or even to a number of objects, and consequently less importance to others. A person's identity refers to certain properties of the social world to which a person feels a special sense of attachment or ownership, that is, in all their deliberations about the world and with regards to their activities in this world, they prioritise some reasons for action over and against others. As a result, they see the world in a particular way, although they may share that world with other people who subscribe to the same or similar markers of identity. All of these identity markers are imagined conceptualisations of the social object, so racial, spatial, historical, ethnic, religious, sexualised, embodied or familiar attachments comprise imagined and constructed narratives about race, geographies, histories, ethnicities, religions, sexualities, bodies or social groupings. Frequently, human beings reify the properties of the social object to which they are attached, treating them as natural or as common sense, and thus beyond reproach.

A person's sense of identity, then, consists of those features of the imagined object that define them as a person, or even that make them the person that they are. They give that person a sense of belonging, and they focus that person in a particular way. Fundamentally, personal identity is a matter of what human beings care about in the world. They are also markers of difference; that is, they refer to the type and extent of dissimilarity between different manifestations of the social object, that is, abled and dis-abled, male and female, black and white, heterosexual and homosexual, intelligent and unintelligent, and precariat and middle class. Crude versions of these relations are ever-present in modern societies. However, difference can become pathological if different sets of values, usually in opposition to each other, are attached to different manifestations of the social object.

Identity is being used here to indicate a sense of wholeness, and thus persistence across time. All discussions of a person over time require some understanding of change; that is, a notion of change is built into the conception of the human being. If there were no cohering element between time moments, so that every moment entailed a change of

person, we would not have a sense of personhood, which therefore has to include a notion of persistence over time, and, in addition, has a notion of emergence. And this is emergence understood in its two modes: as a temporal phenomenon and ontologically as a response to the stratified nature of reality. Identity and consciousness are homologous concepts and can be understood as having a particular form.

There are a number of theories of consciousness in use, and these largely divide between physicalist theories, mind–body separations and separate functioning systems (see Van Gulick, 2018). Physicalist theories vary enormously in their scope and direction. For example, some type–type identity theories[166] deny the notion of consciousness altogether, whereas others argue that since the conscious property and the neural property are of the same type, then there is no need to explain how the one can cause the other or give rise to it. Most physicalist theories of consciousness are not of this type but aim to understand the world in terms of some form of psycho-physicalist relation, in which the two are not identical. All of these theories come up against the existence of free will, and all of them are essentially deterministic.

Those who subscribe to dualist theories argue that some operations of the mind fall outside the realm of the physical and cause–effect–cause relations, as they are generally understood. Substance theorists suggest that there are both physical and non-physical substances, and minds are examples of the latter, with these minds embracing a notion of consciousness. Property dualists suggest that minds cannot be reduced to physical properties, but nonetheless causal relations can be instantiated by the same substances that trigger the operation of physical processes. Emergent property dualists introduce into the equation a notion of emergence, so that even though they accept that consciousness and conscious processes come about through the operation of physical processes, the result cannot be understood or expressed in physicalist terms (or, it needs to be said, in how linguistic and semantic structures currently operate). These dualist theories mark out a clear distinction between the properties of the mind and the properties of a physical reality, and it is hard to see how any theory of consciousness could be anything other than vacuous if a purely physicalist theory is endorsed.

A typical dualist position is that substances and processes in the mind cannot be directly subsumed into physical substances and processes, that is, there are significant differences between the two.[167] However, we

[166] Type–type theorists assert that events in the mind can be grouped into types, and can then be correlated with types of physical events in the brain.
[167] See Nagel (1974; 2012).

do not have at present, and possibly ever, a language for describing states of the mind, even if we can provide good grounds for suggesting that they are different. What this means is that we cannot provide a convincing account of what these states are, and what the relation between states of the mind and physical states might be, although we can infer that differences exist between them. The problem with a physicalist notion of consciousness is that every action of the mind cannot be explained fully by an identical movement in the brain. It is this missing knowledge that constitutes the core of consciousness. Consciousness under this view is more than what we already know about the mind and the brain, and more than we can literally ever know.

Separate functioning systems theories are dualist in essence, because it is argued that there are two different systems in operation, one of them being more powerful than the other (although the use of the word 'powerful' gives a greater authority to a physicalist view of the mind, the world and the relations between them, than to a form of consciousness that prioritises intention and reason giving over a brute physical reality). The first system then is irreducibly physicalist, an example of which might be taking a narcotic substance, leaving a person less aware, less alert and feeling carefree, and, this is the important point, overriding the normal processes of consciousness, those of reason giving, inferencing and acting intentionally. The second system is concerned with volitional behaviours, meaning-making processes and semantic evaluations. Both operate in conjunction with each other; however, they do not operate in the same way. Consciousness is thus too complicated to explain using the methods of physicalism or neurophysiology alone. What physicalist notions of consciousness cannot do is explain in a satisfactory manner those striations and divisions (gender, race, dis-ability, intelligence, sexuality and social class, for example) that embody our social and political arrangements, and what we should do about them.

Gender

The male/female binary has a number of manifestations. The first model that we need to consider is liberal feminist. The emphasis here is on removing barriers to women's participation in public life, and arguing for a more equal share for women in the rights, privileges and opportunities enjoyed by men. An alternative feminist perspective is an attempt by feminists to integrate their approaches into mainstream

critical theories such as Marxism, structuralism and post-structuralism. Feminists of this persuasion argue that gender inequality derives from capitalist economic and social relations, and that men's domination over women is a by-product of capital's domination of labour. This form of patriarchy is structural, and resistance to it has taken an intersectional form. The purpose of intersectionality is to develop a single framework for analysing power that encompasses sexism, colonisation, racism, class oppression, heterosexism and other axes of oppression, as they play out in history and society.

A different feminist perspective is that traditional feminine values should be valorised over traditional male values. Feminists of this persuasion accept the view that women's nature is different from men's, and that women excel in relational and nurturing practices. They go on to argue that the characteristics associated with femaleness such as caring, relatedness and attentiveness should be privileged over male characteristics, such as rationality, objectivity and disinterestedness. Radical feminists shift the focus from equal opportunities to the phallocentric nature of all systems of representation, and argue that, whenever the two sexes are represented in a single model, the feminine is always collapsed into a universal model represented in masculine terms. Feminists of this type have shown how the general concepts, assumptions and categories of thought have been organised around hierarchies, which, by association, privilege masculinity and devalue femininity. Regardless of which academic discipline or framework radical feminists are working within, there is a widespread recognition that ethical and epistemological issues do not exist in a vacuum, but rather exert a significant influence on concepts, ideals and values.

There are other directions that feminism has taken. The first of these is political in a proactive sense, so that feminism is understood, first, as a means by which women are given equal status in important and powerful positions in society, in the boardroom, in the legislature, in the judiciary, in the armed forces, as top earners and in the media. The argument that this will change politics, business, the enforcement of the law, media opinion and the like to a more consensual, democratic and softer form of governing relations in society has been abandoned, with the impulse now towards a general balance of men and women. The second strand is to embrace and participate in libertarian practices, much favoured by the right-wing patriarchy in the political process. The intent is an equalising of pleasure and liberty between the different sexes. This amounts to limited forms of change in society, which can be easily accommodated by capitalist or neoliberal structures and arrangements.

Another direction that feminism has been exploring is category subversion. This has taken two forms. The first is through recognising and institutionalising different forms of sexuality; for example, lesbian, asexual, transgendered, queer/questioning, autosexual, intersexual, gay, bisexual and other types of sexual identity. What is distinctive about this is the fluid nature of sexuality, with people moving between different sexual identities over time. Newer forms of sexual identity are being created, and for some these are becoming well-defined markers of identity and lifestyle. This has consequences and implications for public policy because many of these new forms of sexual identity are deliberately crafted as oppositional and transgressive. The second and more powerful response that feminists are increasingly taking is to challenge in a fundamental sense the male/female binary category and the positioning of women within it. This involves a direct challenge to the idea of natural differences between men and women and, in a more fundamental sense, to the whole idea of difference. Crude versions of these different relations are hegemonic in modern societies. These categories then, such as the male/female dyad, are not natural or definitive divisions but constructed categorisations (formed and re-formed by human beings in society) that enable certain types of political and social arrangements. An extreme version of this argument is that there are no meaningful natural divisions or differences between social objects – similarities and differences between objects can only be attributed to the functioning of the relevant concepts, and not to any natural processes. Any activity in and about the world is dependent on a human being or human beings acting in the world, and this applies as much to concept-development as it does to other worldly practices.

All these varieties of feminism show how gender relations operate in favour of male domination, and their fundamental purpose is to help effect a redistribution of power towards women. However, the category *woman* is not understood in the same way by everyone, nor is the category of *female* as opposed to *male* – women's experience is differentiated in the life-course. This means that we need to be sensitive to this diversity of women's experience, and to the power relations that are present among women, and, this hardly needs saying, to those that are present between and among men, women and intersex persons.

Race

The concept of race has been used to signify a division of people into different groups. (This is only one way it can be used.) Under this

conception, racial divisions are said to have some type of biological foundation, and this generates discrete racial groupings, so that members of each group share a set of biological characteristics that are not shared by members of other groups. These characteristics are inherited from other members of the same racial grouping, and it therefore becomes possible to identify the geographical origin of each race. These inherited characteristics are usually thought of as physical phenotypes, such as colour of hair, skin colour, eye shape and bone structure; however, and this is where it becomes much more complicated and divisive, sometimes these characteristics are used to refer to behavioural phenotypes such as intelligence or criminality. A belief in the concept of race as it is understood and defined here leads to certain social and political practices that discriminate against particular people, and, in addition, to the formation and re-formation of categories such as indigeneity, and, subsequently, to the development of social, cultural and pedagogical practices associated with them. They are not natural kinds.

The difficulties that these taxonomists encountered led to a belief that race as a category was socially constructed, and not just through the nominalisation process itself or through biology. However, some biologists persisted in their belief in racial categories, arguing that reproductive isolation during human evolution or through social practices such as miscegenation had led to the existence of different groups of human beings sharing physical phenotypes, and even to clusters of genetic material. In addition, some argued for the formation of socially constructed and differentiated racial categories.

Racial naturalism signifies, and is an example of, old biological and essentialist views of race, in which races or divisions of people have heritable, biological features; these are shared only by members of the group and are used to explain behavioural, characterological and cultural predispositions of people who belong to that group. Very few people, and then only those who place themselves at the extreme end of the political spectrum, believe in these biological and essentialist race theories. They are imagined forms of social identity. Racial constructivism, then, is an argument for suggesting that even if biological race theory is false, races and racial divisions exist because they have some form of credibility in particular societies, and that credibility is supported by the racial categorisations used by governments in censuses and the like. Another of these social categories is dis-ability.

Dis-ability

The underpinning philosophy of inclusive education systems has in the past drawn on three dominant and contradictory models of dis-ability, namely, the medical, socio-economic and cultural models. Generally, advocates of special education and integration are considered to support the medical model, while purists of inclusion favour the socio-economic model of dis-ability. While the medical model suggests that problems and differences lie with the individual, the social model places the emphasis on socio-economic and cultural factors. Examples of socio-economic factors are poor nutrition or contaminated water, while cultural factors refer to the ideological construction of the notion of dis-ability or difference. For example, the language used in a specific culture for dis-ability or disadvantage indicates what is considered to be normal or abnormal in that culture. From this perspective, the focus of the medical model is on biology, which points to a physical treatment for dis-ability and difference. In contrast, in adopting a social model, the emphasis is placed on social barriers to inclusion, such as placing ramps at building entrances to help people with dis-abilities move around. Additionally, from a cultural point of view, the emphasis is on the need to transform the attitudes adopted in relation to, and the language used about, dis-ability and difference, because it impacts on how well people with dis-abilities or differences can be successfully included and represented in society.

Each of these models of dis-ability (medical, socio-economic or cultural) accentuates one facet or qualia at the expense of a totality of mechanisms that are implicated in the formation and reproduction of dis-abilities. The socio-economic has omitted the dis-abled body from the discourse by shifting the emphasis from the biological to the environmental. The medical model, in turn, has neglected environmental factors by foregrounding the dis-abled body, and the cultural model does not pay enough attention to dis-ability's embodiment. Recent research on dis-ability encourages a more holistic approach, and emphasises all the different levels of reality. Dis-ability is consequently understood as a socio-economic, political, embodied, personal and cultural matter.

Intelligence

I am concerned here with the different meanings that can be given to the concept of intelligence. A first possible meaning is where a person is considered to be more intelligent than another person because they

have a set of knowledge constructs, skills, embodiments and dispositions that the other person does not have, or at least has less of, and this is formalised discursively. These utterances are regular events in schools and colleges (Anthony is a bright child, Rebecca is stupid); in IQ testing forums (Anthony has a score of 155 on a standardised IQ test, Rebecca only achieved a score of 78); in making and doing situations (Anthony did not have any problems with working the machine, Rebecca struggled with making it work); in diagnostic settings (Anthony was diagnosed as gifted and talented, whereas Rebecca was diagnosed with moderate cognitive impairment); or as embodied knowledge (Anthony cannot play football at all well, Rebecca, on the other hand, is an excellent footballer). Each of these utterances and ascriptions are framed comparatively.

A second possible meaning that we can give to the notion of intelligence is where a person can act because they are adept at certain activities (being intelligent) in the world, such as logical-mathematical intelligence, linguistic intelligence, spatial intelligence, musical intelligence, bodily-kinesthetic intelligence, intrapersonal intelligence, interpersonal intelligence, naturalistic and existential intelligence.[168] The concept of intelligence can also accommodate the idea of the direction, collection, processing and dissemination of information that has political or military importance. A fourth understanding of the notion of intelligence is as a categorisation of people into higher and lower kinds based on a narrow view of what they have and can do, in an IQ test, for example. The claim is made that this measures a person's capacity to perform a task in a particular set of circumstances.

Intelligence can also be construed as a term which has no real content of its own – it is used to insult, denigrate, separate out or distinguish between people in particular circumstances. For example, we can make a simple internet search for words that denote unintelligent people, but that have no meaningful content: brainless, empty-headed, foolish, idiotic, imbecilic, doltish, dense, dumb, slow, thick-headed, senseless, mentally deficient and so on. They act as meaning conveyers to show differences between people, and between people and other objects.

Intelligence is a word-object that can be deployed to mean knowledge in a general sense, although here it is usually applied to a limited set of actions and activities. Any observations that we make about the world, including those that are integral to the idea of intelligence and can be construed as 'facts', are always conditioned by prior

[168] See Gardner (1983).

understandings we have of the world. Intelligence can also have the sense of being either artificial or human. There are further refinements here. Artificial narrow intelligence refers to a limited range of abilities and capabilities that are commonly found in human beings, but that are also found in machines and in particular computerised machines. Artificial general intelligence refers to a generic range of abilities and capabilities that are commonly found in human beings, but that are also machine-functions. Artificial superintelligence refers to a range of abilities and capabilities that are superior, but still comparable, to human capacities that can be carried out by computerised machines.

A further iteration of intelligence has a specifically ethical meaning, in that an intelligent person is thought of as being in some way a good person or as having good qualities or characteristics. We can also attach the word-object, intelligence, to some notion of ultimate superiority, as in the German term, *Übermenschlich*, meaning superhuman, transcendent, beyond human capacity. These qualities may be acquired naturally, through self-actualisation processes or through learning, learning programmes or learning encounters. Related to this notion of ultimate superiority is the idea of a super-race, referring to an entire category of persons with or able to deploy superhuman characteristics, such as in eugenics, euthenics, genetic engineering, brain–computer interfacing or cyborgian technologisation. Intelligence can be understood praxically, in that it refers to a mind and the mind's fulfilment or completion (a *Bildung*). There are more interpretations or iterations of the concept of intelligence than I have been able to describe here, some of them archaic, some of them contemporary, some of them future-oriented. What this account of intelligence does, however, is show that it is a hinge or foundational concept, both because of its importance and because of its relations with and to key assumptions or presuppositions of our languages, conceptual frames and language games.

Sexuality

Ideas influence human practices, which means that both ideas and practices have histories. The contemporary division of heterosexual and homosexual terms made no sense to the ancient Greeks, although there were regional variations on understandings of sexuality. Same-sex relations, for example, were celebrated in some parts of Greece, whereas in parts of Ionia they were disapproved of. Physiological differences between the sexes were considered to be of less importance than beauty

in either of the sexes. In *Erotikos* (Dialogue on Love) (see Hayes and Nimis, 2011: 32), Plutarch argued that 'the noble lover of beauty engages in love wherever he sees excellence and splendid natural endowment without regard for any difference in physiological detail'. What was regarded as important was whether the person exercised moderation in their sexual dealings. In addition, status had a gendered and aged dimension, so that a freeman having sex with a woman or a boy was considered to be acceptable, but sexual relations between freemen was more problematic. The most important distinction was not physiological but the taking of active or penetrative roles as against passive or penetrated ones. The latter roles were only appropriate for social inferiors, such as women, slaves and male youths.

The early period of the ancient Roman Republic had similar attitudes towards sexuality. With the formation of the Empire, attitudes began to change, even before Christianity became influential. There are few criticisms of same-sex relations in the Gospels; however, early Christian Church fathers spoke out strongly against such relationships. Generally, though, the expression of sexuality, and therefore in particular of same-sex sexuality, was not considered to be sinful. With a greater emphasis placed on marriage (understood as between two people differentiated by their reproductive capabilities) by such renowned scholars as St Augustine (see Van der Meer, 1961), same-sex relations were prohibited and, indeed, in some parts of the now Christian world attracted horrific punishments. For example, in Justinian's code of 529 CE, persons who were caught engaging in homosexual sex were executed, although different provisions applied to those who repented. This rise in intolerance towards certain types of sexual behaviour, such as same-sex relations and sex outside of marriage, had important regional variations. As the Roman Empire weakened, to be replaced by a number of disparate barbarian kingdoms, a general tolerance towards both of these prevailed; indeed, there were few legal prohibitions in Europe against homosexuality right up until the middle of the thirteenth century. All of this changed with the onset of the Gregorian reform movement in the Catholic Church, which argued for licensing natural kinds of sexuality, and therefore for prohibiting unnatural kinds, such as homosexuality, extramarital sex, non-procreative sex within marriage, and sometimes even masturbation (see Boswell, 1980).

This appeal to natural law became a defining feature of the spread of ideas concerning sexuality over the next six hundred years, and it is only now beginning to be played out. However, we should be careful about these distinctions in the early and late medieval periods, as, for

example, a sodomite was understood in a different way from our modern conception of the notion of being a homosexual, or even, in some circumstances, a heterosexual married person. It was not so much being a certain sexual type but engaging in acts of a same-sex nature that was of concern. And, in addition, if the person repented, then they could be excused punishments that were reserved for sodomites. Gender, again, is not decisive.

Despite the risk of severe punishment, homosexual cultures flourished in many European cities in the nineteenth century. In addition, there were significant reductions in legal penalties for sodomy (not just homosexuality), with the Napoleonic Code decriminalising it. However, there were moves, supported by new frameworks of ideas, to reinforce strong boundaries between the sexes, and this in turn meant that same-sex relations between people of roughly the same age became, or at least were becoming, the norm. Scientific accounts of sexuality at this time, based as they were on notions of mechanical causation, led to views of sexuality as biologically given or innate to the person. Medieval views that, for example, sodomy was freely chosen by the individual were giving way to ideas of the passive homosexual, and, as a consequence, it became possible to portray homosexuality as defective or even pathological, with all the authority that the medical model could muster. In the twentieth century, sexual roles were transformed. Premarital intercourse became an acceptable norm, as did the association of sex with pleasure, in opposition to some sections of the Catholic Church, which still understood sex as exclusively procreational. Gay sex became increasingly celebrated. The American Psychiatric Association removed homosexuality from its list of deviant sexual acts, and legal equality for gays and lesbians became permanent features of European and North American life.[169]

Social class

Social class refers to a group of people with similar levels of wealth, influence and status. The distinction between classes, that is, the economic categories that ascribe a person to one class or another, are contested; both in relation to belonging to a particular category, and in relation to the inclusive nature of the category itself. Class

[169] See Aggrawal (2008), for an account of all the different forms that sexuality can take.

has originally been understood as denoting different strata in society. Caste, an early form of class division at the time of the British Raj in India, can be understood as inclusive of the following: membership of the particular caste being determined by birth; a hierarchical system, with the Brahmins at the head of the hierarchy; a segregation of society into more and less powerful groups; inter-group restrictions relating to mixing with other groups, although this did not prevent forms of service where lower caste members served higher caste members; segregated geographical entities and the development of rules and restrictions which allowed higher caste members access and restricted access of lower castes. Occupations were generally inherited, and certain types of occupations were restricted to higher castes, for example, higher caste members such as Brahmins and Kshatriyas became warriors, and lower caste members became agricultural workers, and restrictions were placed on inter-caste marriage. These rules and restrictions were sometimes relaxed at different historical times, and in different parts of India, for economic reasons.

An original distinction in the UK and much of Europe in medieval times was in terms of rank within the estate system of feudal and non-industrial societies, where these distinctions were based on tradition and a complicated system of formal rights and duties. A more sophisticated class system emerged with the advent of industrialisation and capitalist relations of production, where rank and status were gradually replaced by the criterion of material possessions. In the *Communist Manifesto*, Karl Marx and Friedrich Engels (2010) associated class with different relations to the means of production. Thus, for Marx and Engels, the criterion of class was economic. However, the problem with this notion of class is that it is difficult to find a single unambiguous criterion, whether it is occupation or a particular relation to the processes of production, which does not encounter logical and empirical difficulties. For example, how does one classify those who stand outside production and the productive process? For Max Weber (1964), class is a term that allows the identification of individuals with similar life chances in the opportunities for gaining resources. This refers to income and property acquisition, as well as to skill, disposition and cultural capitals. He understood the major historical struggle as being between creditors and debtors, with the conflict under capitalism between employers and workers as being a special case. These different divisions and striations (gender, race, dis-ability, intelligence, sexuality and social class) have implications for the valuations that we make individually and collectively.

Valuations

Mariana Mazzucato (2018), in *The Value of Everything: Making and taking in the global economy*, insists, and rightly so, that both the economic structures that we have set in place, and the means by which we give value to objects within those structures, are valued in themselves. For her, these valuations are skewed in our current social, political and discursive arrangements. Mazzucato further argues that this is where we should start from when we debate issues that are economic (or, of course, educational, social, taxonomic and the like), and the systems of measurement and valuation that inhere in them. For example, she suggests that over the last one hundred and fifty years, we have conformed to understandings about economic affairs that exclude any economic activity that does not have a market value. An example of this is gross domestic product (GDP), seemingly an objective indicator, but, in reality, an ad hoc assemblage of valuations and disvaluations of economic goods with no reasonable or rational basis to them.[170] For Mazzucato, these calculations reward the wrong types of work (understood in a wide sense), discourage those workers whose work is not officially recognised, and thoroughly mislead naive politicians and policymakers. A further problem with GDP is that different countries measure it in different ways, some relating it to income, some to spending and some to production.

How do we determine what valuations should be given to goods and how these goods should be distributed? The valuations we put on particular goods, such as learning or flour, are different for different people. Learning might be valued by some people, even to the extent that it is considered by them to be a primary good, although it may be considered by others to be only a preference in relation to living the good life, even if this preference is shared by a number of other people in society. Flour may be considered to be a primary good only by bread-makers, those who like bread or those that consider bread to be a necessary resource for any form of life. Standards of excellence are determined in and by a practice. Different practices have different

[170] Another example is the measurement of inflation. The three most common ways of measuring it in the UK are the Retail Price Index (RPI), the Consumer Prices Index (CPI) and the Consumer Prices Index with Housing (CPIH). Price inflation refers to the increase in the price of goods and services over time, and the measures differ by looking at: which goods and services are included in the measure (for example, RPI and CPIH include housing costs), the formula used to combine different prices into a single measure, and the political and economic consequences of using one rather than the other.

standards of excellence, and different ways of determining what a standard of excellence might be.

Some values are more basic than others. What this then requires is an ethical programme that: gives an account of a human being that is not entirely solipsistic; shows that within this account there is the possibility of a person acting altruistically or in a way that cannot be subsumed into any of the many individualistic philosophies that have been developed; connects altruism with societal values, both those dispositions acquired by the individual and those values that have credence in the community that this person belongs to; combines a number of normative commitments about a human being: the possibility of there being other minds, the possibility of knowing those other minds, a reason or reasons as to why this set of values should prevail over other values, and a justification for reasons as causal agencies, alongside other types of causal agencies; and provides a justification or compelling set of reasons for this set of social, political and economic arrangements being preferred over any other types of social arrangements.

Economic values and markets

A market, and there are many types, is essentially a place for exchanging goods between people. It has a number of other characteristics: it determines the price value of those goods; it is sensitive to demand with regards to the particular goods bought and sold in that market; it influences the supply of these goods in a way that satisfies demand through the price mechanism; it coordinates publicly available means or mechanisms for alerting consumers to the price of, demand for, supply of, and contents of these goods, which allow the consumer to make judgements about them. All four of these conditions are only present in perfect markets. In reality, there is no such thing as a perfect market, although some markets can be described as more perfect than others.

A perfect market, then, is one in which there is perfect competition. This amounts to the market having a number of characteristics: all the firms operating in the market sell an identical product; none of the firms can influence the market price of their product; prices within this market are not influenced or determined by market share; buyers have complete information about the product and the prices charged by each firm; there is a perfectly mobile system of labour-hire; and firms can join or leave the market without cost. This is a theoretical construct and, therefore, with regards to each of the six conditions, there are

no equivalents in real life. Indeed, there cannot be such equivalents, because markets, both as a concept and as a practice, operate within conceptual networks in the first case, and other means of exchange and distribution in the second case. An alternative view of markets is that interventions, and thus subversions of market mechanisms, are required and justified, to different degrees, so that the benefits are enhanced, and, fundamentally, the disbenefits, such as exploitation, lower standards of goods, waste of time and raw materials, and poor rewards for the workforce, are minimised.

Financial markets, currency markets, stock markets, property markets, agricultural markets, industrial product markets and energy markets have different characteristics, because the object of production, distribution and evaluation in each case is different. This is also true of social markets, such as competitive school markets and employment markets. Some of these differences are related to time and space. So, for example, markets can be local, regional, national or international, and, because of this, they behave differently, not least in their conformity to perfectly competitive markets. Likewise, markets can be short-period markets, as in vegetable and flower markets, because of the durability of the product; medium-period markets, in which interventions in the price and demand mechanisms can be made; and long-period markets, in which the demand and supply mechanism can be fully realised. Markets can also operate as cash markets, with no credit system available, or as future markets, where a credit system is available. Finally, markets or quasi-markets can be focused on particular products to be bought and sold, or they can focus on the behaviour of other markets, in effect buying and selling goods which have already been traded in financial markets, for example, derivative markets.

These types of markets feature as aspects of capitalism. Alternative distribution and exchange mechanisms have the following features: the type and composition of goods is determined by some other mechanism than supply and demand, usually government processes and procedures; the amount of each of these goods in circulation is determined by local or state governance structures; competition for goods of whatever type is reduced; ownership of these goods in the pre-production phase and in the consumption phase is equalised; the value (economic, personal, relational and social) changes; and there are consequences for consumers and producers of these goods, such as less sensitivity to demand and less freedom for people, even if some of these freedoms can be understood as exploitative and dis-equalising, and a slower turnover of goods within societies.

A judgement is always made against a norm of some type, with these norms being epistemic, modal, temporal, spatial, physicalist, hermeneutic, technological, philosophical, ethical, valorising, embodying or creative[171] (see Chapter 4). In the next chapter, I examine more closely one of these normative frameworks, the ethical framework.

[171] These normative types are only addressed in this book superficially for reasons of space and complexity. In the next chapter, I give a brief account of each type.

10
An ethical theory of learning and knowledge

In this chapter, I focus on the concepts of learning and ethics and the relationships between them, their semantic and epistemic dimensions, and how they are used. The meaning of a concept, object, proposition or meta-theory lies in the mediations and negotiations we undertake in the world. This formulation positions the truth-value of a linguistic utterance or proposition about a concept, object, object-configuration, object-relation or person in mind–world and world–mind relationships. The chapter develops a distinctive understanding of the concepts of learning and ethics, and the relationships between them, and it develops a unifying framework for their overarching contribution to social theory. It addresses one of the key issues of our times, that of the relationship between learning and ethics, an issue that is neglected in the field of social ontology.

The key relationship between ethics and learning can be understood in a number of ways, and this depends on how we semantically explicate both of these concepts. In Chapter 2, I suggested that learning could be construed in epistemic, technical, educative, bureaucratic, ethical, cognitive, behaviourist, materialistic, sociocultural, transgressive, phenomenological and curricular ways. Philosophical ethics in turn has a number of different construals. Normative ethical theories may be utilitarian (including Jeremy Bentham's quantitative hedonistic utilitarianism,[172] John Stuart Mill's qualitative hedonistic utilitarianism,[173] preference utilitarianism,[174] act and rule utilitarianism),[175] deontological

[172] For example, see Bentham (1970).
[173] For example, see Mill (2015).
[174] For example, see Hare (1981).
[175] For example, see Sidgwick (1898).

(for example, Immanuel Kant's categorical imperative),[176] and virtue-sensitive (as in Aristotle's virtue ethics).[177] This set of categories assumes that normativity is an essential component of ethics – if we are minded to develop an ethical theory or if we act or try to act in an ethical way, then we have to, if we want to act in a consistent manner, be concerned with the normativity of actions, attitudes or dispositional states. The focus here is on what we ought to do in the life course. Normativity, however, is not just focused on right or correct behaviours, but also has implications and consequences for epistemology and semantics, as we have seen in Chapter 3.

Wilfred Sellars (1997) in his book *Empiricism and the Philosophy of Mind* argued against, and with much force, the argument that what we receive through our senses – sounds, sensations, sights, olfactions and tastes – is received in an unmediated form in the mind of the person doing the sensing activity. His viewpoint implies, unequivocally, that we can never know, where knowing is understood as a function of the mind and not a function of the object itself, what the world is like or what is in the world or how particular objects in the world are actually structured or how we should behave in the world. And yet this set of knowledge claims would seem to rule out these particular objects as having any influence, force or ability to contribute to the formation of minded objects. We are, however, hearing, feeling, seeing, smelling and tasting beings, that is, we take part, and invest ourselves, in the endless process of interacting with our environment. We are also thinking beings, and we think in languaged terms. So, our knowledge claims, including those which I have made above, are claims made within the boundaries of language – we are thus not in a position to think thoughts without a language. This does not mean that objects, processes, object-relations and object-configurations, understood in an ontological sense, do not exist, only that we do not have a language, a symbol system, that can give a proper account of them. From an apperceptual point of view, one of the mediating elements in the transformative process is concerned with valorisations, and, in this chapter, the focus is ethical valorisations and norms. Sense data are transformed normatively into ethical thoughts in the mind. Without some sense of epistemic mediation, the origins of our normative conceptualisations are left blank or mysterious.

[176] For example, see Kant (1992b).
[177] For example, see Aristotle (2018b).

The issue then surrounding the apperception process – a stepped process, as I have argued in Chapter 3 – is how the datum on its learning path towards the making of a judgement is implicated in the set of norms that are objectified in the three nexuses (the antecedent, the coextensive and the pragmatic) that my picture of the world demands. I have already suggested that a judgement is always against a norm of some type, with these norms being epistemic, modal, temporal, spatial, physicalist, hermeneutic, technical, philosophical, ethical, valorising, embodying, creative and the like. This means that there are different types of norms and that they operate in different ways. A norm or set of norms specifies the conditions for making a judgement about the meanings that can be attached to the object that is being accessed – it determines whether those judgements are correct or incorrect. A spatial and/or a chronological norm points to the norm's territorial area of validity. A cognising norm is a determinant of the relationship between world and mind, and mind and world, that is assumed in any judgement that is being made. A hermeneutic norm signifies the interpretive possibilities of the concept in its antecedent, coextensive and pragmatic forms. A technical norm has a specifically apperceptive function, in that it points to the physicalist dimensions of the object alone. A philosophical norm refers to those hinge relations that are assumptions or presuppositions of our languages, conceptual schemes and language games. Ethical norms, which we are primarily concerned about in this chapter, distinguish between acceptable and unacceptable behaviours and judgements. This type of normative judgement is a mix (and a configuration) of consequentialist reasoning, deontological assertion and aretaic valorisation. Embodied norms refer to those embodied features of the human being, such as the capacity to speak, think, believe, move and the like. And, finally, creative norms are the conditions for making imaginative judgements.

Pragmatists, especially those who worked within the geographical and conceptual space of the United States of America, such as C. S. Peirce[178] and John Dewey,[179] reconstituted the idea of belief, what a belief is, so that its contents could only ultimately be understood in terms of its practical consequences, and not in terms of some rational principle. This is essentially a movement away from metaphysics or transcendentalism to a presently oriented judgement about what that belief might engender in the future and to how that judgement influences what we should do. In order to understand a thought or a configuration

[178] See Peirce (1932–68; 1982).
[179] See Dewey (1931).

of thoughts that we might have is, then, for pragmatists, to look at later effects and not at earlier antecedents, which cause that person to act in a particular way. The reason for thinking in this way is because beliefs that incorporate deontological norms and virtue ethics, in their many iterations, have as yet provided no certainty that they are appropriate or correct in and for our lives. We have already seen (see Chapter 4) how difficult the task is of developing a set of norms to underpin a curriculum, even if the task of developing a set of pedagogic strategies is a much easier task. These early pragmatists (John Dewey and C. S. Peirce, for example) were attempting a revolution in thought, which took the form of moving from epistemology to semantics, and from understanding knowledge in propositional terms to understanding knowledge in semantic terms generally.

I am primarily concerned, here, with ethical norms, understanding these in relation to those criteria against which we judge whether our actions or beliefs, or other people's actions or beliefs, are correct or incorrect. Aristotle's view of these ethical norms is encapsulated in his doctrine of the mean.[180] In any sphere of action or domain of feeling, such as human activities associated with fear and confidence, there is a mean virtue, in this case, that of courage. For Aristotle, an excess of courage is rashness, and a deficiency of courage is cowardice. Other spheres of action or feeling discussed by Aristotle (2018b) in the *Nicomachean Ethics* are: pleasure and pain, getting and spending in a minor way, getting and spending in a major way, anger, self-expression, conversation, social conduct, shame, and indignation. A number of questions need to be asked about this inventory, the most important of which is whether this list of virtues is universal (that is, it applies equally to people across time and place) or relates specifically to a particular social formation, for example, ancient Greek society.

Aristotle's notion of a mean or middle point between two extremes has the effect of reducing and delimiting the possible range of virtues. It also acts to create a hierarchy among the virtues, with some of these virtues understood as extremes of some other virtues. So, for

[180] A number of well-known objections have been made to Aristotle's doctrine of the mean, not least Bernard Williams's (1985: 36) well-known characterisation of it as unhelpful and depressing: 'Aristotle's views on [virtue] are bound up with one of the most celebrated and least useful parts of his system, the doctrine of the mean, according to which every virtue of character lies between two correlative faults or vices …, which consist respectively of the excess and the deficiency of something of which the virtue represents the right amount. The theory oscillates between an unhelpful analytical model (which Aristotle himself does not consistently follow) and a substantively depressing doctrine in favour of moderation. The doctrine of the mean is better forgotten.'

example, prodigality and illiberality are understood as extreme versions of liberality and are therefore deficient, and relative to a virtue that is considered sufficient. Consequently, they are understood both in a negative sense and as inferior to some other ethical position. What it does is identify a list of virtues, with some being considered to be more important than others (this, of course, can be achieved by inclusions and omissions), and some being parasitic on others. Further to this, it identifies relations and connections between the primary virtues and particular strengths attached to those virtues. Aristotle's primary virtues are choices made from a list of all the possible virtues that could be envisaged. (This list might include past, but now archaic, virtues, currently fashionable virtues or virtues that reflect the current arrangements in society, and even virtues yet to be instantiated, although imagined.) Furthermore, this choice depends on the semantic content of the virtue.

An objection to Aristotle's notion of the virtues is that although this is considered to be a system of ethics which is rule-based, it does not always conform to this way of thinking. Aristotle (2018b: loc. 33692) is clear in the *Nicomachean Ethics* that 'the mean is not of the thing itself, but relative to us'. He qualifies this with regards to some of the virtues or vices, as he suggests that at least some emotions or acts are wrong per se, regardless of circumstance. He gives a number of examples: malice, shamelessness and envy (these are emotions) and adultery, theft and murder (these are acts). In other words, there cannot be praiseworthy exercises of malice, shamelessness, envy, adultery, theft or murder.

However, to sustain the argument of the virtuous mean, Aristotle needed to develop a notion of difference between human beings, because, as he made clear, in determining the right action for an individual human being it is not just that this person should follow the implicit rules of the already identified and learnt virtuous mean; the person should also judge the right action in relation to the details of the case, which include, above all else, the actual set of dispositions that person has acquired at a particular point in time. These character traits comprise tendencies towards excesses and deficiencies, and towards committing certain types of error – logical, epistemic, semantic and the like. The virtuous act requires a prior disposition of self-regulation or self-observation that is able to identify these character flaws and allow for correction. What this means is that both the identification of the mean and the identification of its excesses and deficiencies require a judgement to be made about whether those dispositions qualify as virtues, and furthermore about

whether there are excesses and deficiencies that fit with the virtue and with the overall and desired ethic of living. In short, the question needs to be asked: Why these and not others? The doctrine of the mean cannot provide a satisfactory answer to this question.

The doctrine of the mean does not amount to the idea that emotions should always be of moderate intensity, or that strong emotions are in some sense pathologies, or that in acting the human being should always express their emotions moderately, or that human beings should seek everything in moderation, or that every virtue has faults and vices, or even that the relations between the virtues and their corresponding excesses and deficiencies are rule-based. Rather, excellence is observed by following the mean as far as this is possible. However, even given this, we are still unclear about the origins of these ethical norms, or even about their justification as ethical normative framings. There is a sense of them just being preferences of powerful people in society, and nothing more. Another ethical normative theory is Martha Nussbaum's liberal theory of justice.

Martha Nussbaum's liberal theory of justice rests on the possibility of there being such objects as universals. In the first edition of her book *Sex and Social Justice* (2000a), she sets out her sense of universal capacities, calling them central human functional capabilities:

1. *Life*. Being able to live to the end of a human life of normal length, not dying prematurely or before one's life is so reduced as to be not worth living.
2. *Bodily health and integrity*. Being able to have good health, including reproductive health; being adequately nourished, being able to have adequate shelter.
3. *Bodily integrity*. Being able to move freely from place to place; being able to secure against violent assault, including sexual assault, marital rape, and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
4. *Senses, imagination, thought*. Being able to use the imagination, to think, and to reason – and do these things in a 'truly human' way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training; being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice (religious, literary, musical, etc.); being able to

use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech and freedom of religious exercise; being able to have pleasurable experiences and to avoid non-beneficial pain.

5. *Emotions*. Being able to have attachments to things and persons outside ourselves; being able to love those who love and care for us; being able to grieve at their absence; in general, being able to love, to grieve, to experience longing, gratitude, and justified anger; not having one's emotional development blighted by fear or anxiety. (Supporting this capability means supporting forms of human association that can be shown to be crucial in their development.)
6. *Practical reason*. Being able to form a conception of the good, and to engage in critical reflection about the planning of one's own life. (This entails protection for the liberty of conscience.)
7. *Affiliation*. (a) Being able to live for and in relation to others, to recognize and show concern for other human beings, to engage in various forms of social interaction; being able to imagine the situation of another and to have compassion for that situation; having the capability for both justice and friendship. (Protecting this capability means, once again, protecting institutions that constitute such forms of affiliation, and also protecting the freedoms of assembly and political speech.) (b) Having the social bases of self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. (This entails provisions of non-discrimination.)
8. *Other species*. Being able to live with, have concern for, and being in relation to animals, plants, and the world of nature.
9. *Play*. Being able to laugh, to play, to enjoy recreational activity.
10. *Control over one's environment*. (a) *Political*: being able to participate effectively in political choices that govern one's life; having the right of political participation, free speech, and freedom of association. (b) *Material*: being able to hold property (both land and moveable goods); having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able to work as a human being, exercising practical reason and entering into meaningful relationships of mutual recognition with other workers. (Nussbaum, 2000a: 40–2)

Nussbaum's liberal principle is that everyone should be treated equally (men, women and intersex persons) unless those characteristics that constitute their difference are such that this becomes impossible or unfeasible. The default position is always one of equality of esteem and treatment.[181] This is principally a normative ethic of equality.

Ethical and normative concept-use and framing can best be understood by examining an argument or set of reasons for doing something in the world, for example, acting in an altruistic manner.[182] The reason for choosing this ethical and praxical issue is that there are profound disagreements in societies around the world about whether altruism is possible. There are five positions that we can take on this issue, some of them denying the possibility of altruistic behaviour, and others suggesting that it might be possible. The first is to deny that human beings categorically act from motivations (the psychological element) or have inclinations (the dispositional element) or operate from and with a set of beliefs (the philosophical element) that in any way we can call other than in their own best interests, as they understand them. The second is to suggest that human beings are not and cannot be, by virtue of what it means to be a human being, repositories of motivational elements, dispositional inclinations or sets of beliefs that in any way we can think of as altruistic. The third position that we can take is to suggest that these repositories of motivational elements, dispositional inclinations or sets of beliefs are not fundamental to being human, but are learnt and acquired motivations, dispositions or beliefs, and consequently it is possible to imagine a situation in which a person or a group of persons become more altruistic than they were before. And the fourth position that it is possible to take is that altruism as a belief, motivation or disposition is integral to the human being, which means that we can only avoid acting in an altruistic manner if we deny our essential human nature. There is also a fifth position.

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[181] Moral equality is a rights-based notion of justice, and it consists of treating everyone, especially men and women, equally. Everyone deserves to be treated with respect and dignity because they are human. This is a conception of justice which is substantive, universal and morally equivalent. In Kant's (2007) moral philosophy, the categorical imperative is underpinned by an equality notion of universal human worth. Martha Nussbaum's central human functional capabilities is another example (see above) (see also, Nussbaum, 2000b). However, recognising that all human beings are equal does not logically and categorically lead us to the view that we should treat all persons equally, as John Rawls (1971) was so concerned to argue.

[182] For a fuller treatment of this fundamental ethical problem, see Thomas Nagel's (1970) book on the possibility of altruism.

What each of these positions suggests is that learning is an essential and foundational element in the reason-giving argument that I am proposing. The argument that I will be defending in this chapter, albeit in a restricted sense[183] – the fifth position – is the contention that it is possible to identify a direct reason to promote the interests of others, and that reason does not depend on, or is not constructed in relation to, interests which we can say are only relevant to that person or benefit in a direct sense that person, or follow from the valued and valorised sentiments and inclinations that the person already holds.

Gaza and Israel

Categories and concepts are time-oriented or temporally related. Learning as a concept and as a practice has a temporal dimension. If we understand it as a process – a first event produces or leads to a second event, which in turn leads to a third event – then we are identifying three time points, each of these time points being arranged sequentially. And, further to this, these three time points roughly correspond to what we understand as the past, the present and the future. This holds with the exception of our understanding of the present. Any *presencing* activity[184] is an intrusive act in the ceaseless flow of time. In addition, self-reflection or taking part in an internal conversation or in an examination of the self (especially in a religious sense) all refer to past occurrences – they are never acts of reflection about present occurrences. The whole present is never available for self-examination (see Scott, 2021). From this, we can then determine three temporal configurations: a full understanding of a text (event, occurrence, written account, spoken account, epistemic process) in terms of its immersion in the past and the present-past, a text that is wholly concerned with predicting and influencing the future, and a text that takes account of all the possible temporal configurations that are relevant to it. In the last case, there is an added complication: that we now also have to determine what the relations might be between these different temporal configurations.

[183] What this means is that I will begin the argument here and finish it somewhere else, because the argument is long and complicated, and there is not enough space in this book for its fullest expression. However, this does not or should not detract or divert us from the argument that learning has ethically normative dimensions, an essential part of the full argument in the book.

[184] For a fuller account of the notion of presencing, see Henri Bergson (1999) *Duration and Simultaneity*.

The first temporal configuration might include descriptions of historical events that occurred in the near past as well as the distant past (the choice of which of these events is important to the present, as is the way each occurrence is described and the valorisations that are attached to them). Here are a series of statements about the Israeli–Palestinian conflict:

1. On 7 October 2023, the Palestinian group Hamas launched an assault on the local communities near the Gazan border (imposed by Israel after the 1967 war, and after their occupation of Gaza) with Israel. More than 1,400 Israelis were killed and some 220 hostages, including children, were taken and imprisoned in Gaza.
2. The Israeli government cut off electricity and most water supplies to Gaza, and stopped the provision of food and medicine from outside its borders, although it did allow a limited amount of these provisions through Egypt's Rafah crossing.
3. Britain took control of the area called Palestine (including what is now known as Gaza, Greater Israel and the West Bank) after defeating the Ottoman Dynasty, which had ruled that part of the Middle East during the First World War. The land was inhabited by a Jewish minority and a Palestinian/Arab majority.
4. In the Balfour Declaration of 1917, Britain promised to create a national homeland in the Palestine area for Jewish people. This created an immediate problem, since both the Jewish (and many Jewish communities around the world) and Palestinian peoples understood the land as their ancestral home.
5. In 1947, the United Nations voted for the Palestine area to be divided up between separate Palestinian and Jewish states, with Jerusalem becoming an international city. The plan was never implemented.
6. In 1948, the British withdrew from the Palestine area, and Israel declared the creation of the State of Israel. Five Arab countries attacked Israel and after the fighting ceased, hundreds of thousands of Palestinian Arabs had been displaced, Jordan occupied the land which is now known as the West Bank, and Egypt occupied Gaza – Jerusalem was divided between Israeli forces in the West and Jordanian forces in the East.
7. In the 1967 war between Israel and the bordering Arab States, Israel occupied by force the eastern part of Jerusalem, the West Bank, the Syrian Golan Heights, Gaza and the Egyptian Sinai Peninsula. Most Palestinians or those with Palestinian heritages now live in Gaza, the

West Bank and neighbouring Jordan, Syria and Lebanon. Gaza and the West Bank are now de facto Israeli colonies (through control of its borders, movement of its people and its economic activity, but not through direct governance).

8. In the past fifty years, Israel has allowed Jewish settlers to build homes in the West Bank and East Jerusalem, and there are now approximately 700,000 Jews in these settlements, although these are in direct contravention of international law.
9. The peoples of this region continue to self-identify as Jews or Palestinians, with their historical and religious overtones.[185]

These statements are not value-free facts about an event, or series of events, or series of occurrences in the world. Either through omission or selection or partiality, a particular picture is being painted of the conflict. Furthermore, one of the ways in which these pictures are being painted is to set the different interpretations within a temporal framework, that is, a predominantly antecedent network, a contemporaneous network or a futures-nexus. Which one of these we choose to adopt will influence but not determine the ethical approach that we can take towards the Kibbutz Be'eri, the Nova Festival, Kfar Assa, Sderot and Nir Oz massacres, and the subsequent response of the Israeli government. For example, we can adopt a deontological attitude towards the issue, if we ignore the history of the region and talk just about the brutality of these two occurrences, or we can seek to explain what happened recently as a consequence of the ethnic histories of these peoples, or we can take a purely partisan attitude towards these events, and subsequently construct an ethical approach in these terms. The temporal dimension to any ethical theory is frequently downplayed and marginalised.[186]

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[185] These nine factually based statements about the Israeli–Palestinian Conflict can never be more than brief flirtations with the truth of what has actually happened and what is happening now. What we do know, however, is that there has been a large loss of life over a long period of time.

[186] Recently the Israeli ambassador to the United Kingdom rejected outright the notion of a two state solution to the crisis, and at the same time rejected the idea of a single Palestinian state in the area that now includes Israel, Gaza and the Palestine Authority, on the grounds that this would put at risk the idea of a Jewish state, a religio-authoritarian governance structure, which by virtue of its religiosity would consist of two types of citizens unequally positioned and resourced. The third solution, if we can call it a solution, is a dividing up of the land into areas for a coloniser and areas for the colonised, with this rigid form of apartheid being policed by the dominant body of people.

Ethical codes

Here are the Principles of Integrity promulgated by University College London with regard to research work (see Box 10.1).[187]

The intention is clear: to frame the research process in a particular way, to decontextualise the notion of what research is, to control the behaviours of researchers in the organisation, to delimit research to a positivist/empiricist rendition of it, and to specify what the epistemic and ethical commitments and responsibilities of the researcher should be. This, however, is not how the framers of this protocol understand their principles of integrity. They understand them as a set of deontological prescriptions about how researchers should behave, if they want to do a piece of research which is fundamentally ethical and valid (see Chapter 8 for a discussion of the relationship between these two important concepts). Have a look at the way the concept of data is understood here as aconceptual and devalorised, and the way it consequently can be separated out from analysis, audit or review. Have a further look at the way the key ethical concepts (leading to a set of prescriptive behaviours) of honesty, rigour, transparency, care and personal responsibility are used in the text to denote a particular framing of knowledge. And, finally, have a look at the universalising and unisemic process that is being enthusiastically endorsed and propagated.

The principle that is being ignored in this ethical protocol is that philosophical issues are integral to research, knowing and learning. What is it, then, that we need to think about when we come to do research or knowledge gathering or looking at the world? One possible response is to assume that the activity itself is simply a matter of following the right procedures, rules, ethical stances or methods. This assumption, however, needs to be questioned, because it misleadingly portrays research and knowledge development as mechanistic and algorithmic, and not as a learning activity. If we uncritically accept this portrayal, we forget that knowledge development is a social practice, and that it is therefore contextualised, conceptual and embodied. One thing we can do in terms of becoming more aware of what we are doing is to recognise that it is not a technology or set of fixed behaviours but a learning practice, and that it is not individualistic but social and ethical.

[187] There are many of these ethical codes for researchers in other universities around the world. All of them are reductive in epistemic terms, and deagentising in spirit and in reality.

Box 10.1 UCL Principles of Integrity

It is expected that the Principles of Integrity as set out below (adopted from the concordat) are applied to all research at all stages (including the pre and post stages of research such as applying for funding and peer review), regardless of the discipline. This is why a key message of research integrity at UCL is its importance for every researcher, every discipline, every day.

- Honesty in all aspects of research, including in gathering data; in the presentation of research goals, intentions and findings; in using and acknowledging the work of other researchers; and in conveying valid interpretations and making justifiable claims based on research findings in reporting on research methods and procedures.
- Rigour, in line with prevailing disciplinary norms and standards: in designing research and using appropriate methods; in performing research; in adhering to an agreed protocol where appropriate; in drawing interpretations and conclusions from the research; and in communicating the results.
- Transparency and open communication in declaring conflicts of interest; in the reporting of research data collection methods; in the analysis and interpretation of data; in making research findings widely available, which includes sharing negative or null results (as appropriate) to ensure the accuracy of the research record; and in presenting the work to other researchers and to the general public.
- Care and respect for all participants in, and subjects of, research (including their data), involving humans, animals, the environment and cultural objects. This includes showing care and respect for other disciplines and researchers, acknowledging the work of others, and respectful communication with those involved in undertaking or supporting research. Those engaged with research must also show care and respect for the stewardship of research and scholarship for future generations through ensuring the accuracy of the research record, including correcting honest errors.
- Personal responsibility for your own actions, in how you conduct your research and how you work collaboratively with others. Though everyone involved in research will have their own specific responsibilities and levels of formal accountability, every individual has a responsibility to act with integrity and to take responsibility for their own actions or inactions.

Virtue ethics

Virtue ethics is one of the three approaches to ethics that have a normative dimension.[188] It foregrounds the virtues or moral character of the individual and can be contrasted with approaches that focus on duties or rules, as in deontological ethics, or on the consequences of actions, as in consequentialism. Virtue ethics are different from deontological and consequentialist ethical forms in a number of ways. They are related to dispositions, and what this means is that the ethical act comprises an inner state, which is already there (in some form or another), having been learnt, seeking to express itself in the world in relation to a problem in the world that requires some action. Dispositions, as inner states, precede, condition and have some influence over actions. A disposition is a character type, a habituation, a state of preparation or readiness and a tendency to act in a specified way. Dispositions, then, have this persistent quality, although they can in time be modified.[189] They have a strong affinity with a person's chosen identity, and they are essential elements of any coherent theory of learning.

The virtues also operate at the cultural or discursive level. At this level, they are dependent on membership of a practice, and this includes how they are instantiated in that practice. They are practice-based insofar as being excellent in the practice requires a judgement to be made as to what is considered to have value in the practice. This therefore implies a relation (a type of progression) between a novice and an expert within the practice.[190] The pivotal issue here is that any designation of an ethical virtue is always, and can only be, understood in terms of some conception of how a society or social grouping is organised, or even perhaps about excellence within a practice. Ethical judgements always supervene on epistemological judgements.[191] The

[188] There are many ethical theories in existence, such as: axiological theories, collectivism, Confucianism, consequentialism, deontological ethics, egalitarianism, hedonism, humanism, individualism, moral realism, natural law, nihilism, normative ethics, objectivism, relativism, utilitarianism and virtue ethics.

[189] The argument that I am making in this chapter is that concepts are essentially acquired dispositions. In defence of this proposition, I have already suggested that even the most propositional of statements can be expressed as doing something in the world.

[190] Alastair MacIntyre's (1981) notion of a practice in which virtue resides in the pursuit of excellence within that practice would also embrace witchcraft, iniquity, autocracy and the like, and thus there needs to be some notion of deontology or consequentialism attached to the particular goods that are being sought in the practice and what the practice is about.

[191] One of the consequences of arguing that ethics supervenes on knowledge is that one has to look in the first instance for the knowledge element in any ethical judgement we might want to make, with this epistemological and ontological object-relation traditionally expressed as a relation between knowing the world and the world itself.

reason why this notion is important is that, first, the identification of virtues requires a theory of knowledge (that is, epistemology) and of being (that is, ontology) and the identification of a relationship between the two, including a notion of volition; and, second, any ethical theory (deontological, consequentialist or virtue-based) requires a theory of intention.

The educative or learning element of the process can be construed in the following way: as an entry point or access portal to the mind of a person; as a fundamental change element; as a meeting point between world and mind, and then ultimately between mind and world (where world includes other minds); in a semantic sense as a values or valorisation attachment at which the values attached to the object are changed or reworked in relation to the fields of valorisation currently in use; in an epistemic sense; and more. In the last chapter of this book, I examine the notion of transgressive forms of learning, understanding learning as an essential part of the epistemic process.

11
Critical learning and knowledge

In the preceding chapters, I suggested that the meta-concept of learning has to be an integral part of any social theory that we might want to develop, and that if we are to understand what the concept and practice of learning is, then we have to look at a vast array of concepts and conceptual practices that are relevant to it. Acts of deconstructing and reconstructing concepts and conceptual frames such as justification or justifying, meaning or semiosis, indigeneity or indigenising, curriculum or curricularising, pedagogy or pedagogising, autonomy or being autonomous, inclusion or including, and education or educating, are therefore central to the work of this book, and also to the trilogy of books that I have just finished writing. All of them have a direct relationship with learning and can be positioned in learning fields. However, these positionings need to be made explicit or, at least, good reasons need to be provided for their inclusion in these fields.

Any account of the world, whether in the natural or social sciences, makes knowledge claims, and for that reason alone is of some importance in the scheme of things. Indeed, it could be argued that all the learning activities that I have written about in this book have an underlying epistemology, even though this is rarely made explicit – most of the time, the epistemology is either unrecognised or taken for granted. It is simply assumed that the learning process will be positivist-empiricist in its epistemology, and therefore unproblematic. Nowadays, this taken-for-granted approach to epistemology is no longer considered adequate, principally because it is now generally accepted that making a knowledge claim is deeply embedded in our social practices. It is these social conceptions that are embodied in an epistemology, the most powerful of which is the conception that holds up the methods

and procedures of the natural sciences as the model for producing valid knowledge claims. The rules for policing knowledge claims are themselves culturally located; epistemologies are as much about politics or power as they are about logic.[192]

The contemporary world can be characterised by the intimate connections between learning, knowledge and policymaking. Educational researchers and those who focus exclusively on learning matters are considered experts because of their expert knowledge, and they are distinguishable from those who are to be informed by that knowledge. This is simply another facet of the theory–practice binary, with the former privileged over the latter, a binary which has caused a multitude of problems in both educational practice and research. It is empiricism which shapes this position, and technical-rationality, the enactment of these principles in the realm of practice, which plays a key role. Technical-rationality involves practices of expertise based on law-like generalisations or nomothetic statements based on scientifically derived knowledge. It is the deployment of instrumental rationality in choosing the most efficient means based on expertise in achieving pre-specified ends. With technical-rationality, there is an assumption made by empiricists that values are simply not relevant.

Another layer is provided by the conceptual framework of representational realism, a framework that is presupposed by empiricism and the practices of technical-rationality. Our common-sense intuition tells us that the world exists independently of our lives and sociocultural practices, including the practices of learning and all those accounts of the world that are made. We feel that the world is real, that it exists around us, out there, indifferent to our hopes, beliefs and desires at any particular moment. This independent, objective, world is the yardstick against which we measure our hopes and beliefs, in order to assess and establish their truth and reality. The nature of this independent world is something about which we can make discoveries through learning, and our knowledge increases with every discovery. These scientific accounts bring us closer to true descriptions of the world in the form of theories that express these truths. Representational realism overlaid by empiricism can therefore be summed up in three propositions: first, that reality is self-evidently available and can be accessed directly;

[192] Many philosophers of education, and especially those who profess to a religious catholicity, are in essence deeply conservative in their outlook, even if they dress up what they have to say in a liberal carapace. Their liberality is of course compassionate in orientation; however, when challenged, they quickly show their true colours – those of repression and division.

second, that science is free of its own cultural influences; and, third, that knowledge is produced by means of immutable methods.

The independent existence of the world, and the way we have unmediated access to it, is the essence of the view of objectivity shared by common sense, science and technical-rationality.[193] Truth is achieved through applying appropriate rationally grounded techniques. Once a statement about the world is found to be true, it is true absolutely for everyone anywhere. For any field of understanding, there will be one true description of the world, and this description must command universal assent, since once a truth is established, it is unassailable; it has a cognitive authority which makes it irrational not to assent to it. Moreover, the values, 'true' and 'false', as applied to statements about the world, exhaust all its possibilities. One cannot have 'true just for x' or 'neither true nor false'; representational realism inclines us to believe that such statements would literally be meaningless. All propositional statements must be either true or false, and must be non-contradictory, since otherwise no true description of the world would be possible, given the consequent plurality of incommensurable truths.

In direct forms of realism, the relation between theories that explain the world and the world itself has to be understood on the model of the external perspective, the God's-eye point of view. We come to know about the world but without being in it. The world consists of independently existing objects of which there can only be one true description; a description that is guaranteed by the elimination of bias and language-ambiguity. Truth is a matter of correspondence between statements about the world contained in theories and the way the world is, its reality. It is the presence of reality, therefore, that determines truth, which is, in effect, the measure of truth; presence is the *voice* of nature, the origin, the authorising centre, which places the necessary restrictions or limits on how the world can be described, and how it can be known. It eliminates any distortion in representing or knowing the world, so that the latter can be represented in the language of knowledge. The priority or pre-existence of the world 'as it really is' over any descriptions we make of it implies that the role of language is to be a transparent medium that enables the world to be accurately represented. Language is tied to the world through relations of correspondence between names and sentences and objects and states of the world. For the empiricist, the only language that counts is language which is referential and literal, with

[193] And by many people who call themselves realist.

pure and unambiguous meanings, free from the distortions of interpretation and the figural.

Embodied in representational realism is a picture of a universally correct standard of rationality operating according to the laws of inferential logic. Individuals are considered to be endowed with the capacity, even if to varying degrees, of exercising this rationality; a rationality that is seen as an essence of a natural kind, rather than as an outcome and function of the norms and practices of particular societies. Knowledge can be systematically extended by deploying this invariant and universal standard of rationality. For representational realism, therefore, the history of science is that of a cumulative, linear progression from ignorance to knowledge, a steady and inexorable movement away from incompleteness and error. Here, we have in plain sight a manifestation of Enlightenment thought, a suitable metaphysics of and for modernity.

Notions such as the immutability of methods and the linear cumulative progress of scientific knowledge were dealt a severe blow by Thomas Kuhn (1962). He argued that scientific discovery belongs to the realm of the cultural and the historical rather than the transcendental. The powerful realist picture we have of scientific research is essentially universal, a projection of a particularly Western understanding and history. Furthermore, there is a divergence between the avowed methodology and self-understandings of scientists and their actual practice. Kuhn focused instead on science as an activity, and in doing so showed that scientific understanding consisted not only of theories and laws but also of metaphysical commitments such as representational realism, which are taught through the practices of scientific research. His work has stimulated the post-positivist critique of science, and of positivism's idealised and ahistorical reconstruction of science. Post-positivism[194] foregrounds the actual practices of science, and by looking at the historical development of a variety of scientific knowledges, puts forward an anti-essentialist position on this type of knowledge, one that focuses on the local and situational features of scientific practices, and which denies any single and universal set of features qualifying a practice as scientific.

This post-positivist critique has provided a means of arguing that the positivist-empiricist view of science is oppressive, limiting and possibly

[194] Post-positivism, of course, in itself makes certain assumptions about the nature of the relationships between world-and-mind and mind-and-world, which are, or have to be, universal or transcendental.

even untenable. But, again, we cannot extrapolate from this and argue that representational realism is dead. Indeed, we could argue quite the opposite, that it is still pervasive, despite the inroads of post-positivism, and has stubbornly refused to succumb to the onslaught of this critique. It is significant that with each one of these statements, we progressively move further away from common-sense intuition into representation as a metaphysical thesis that goes far beyond such intuition. This is most aptly caricatured in the epistemological fetish with detachment and neutrality; a narrative of universal truth that at the same time denies the truth of the privileges, interests and politics of knowledge-developers. This is the so-called objectivity of knowers and learners, an objectivity that casts these knowers and learners as abstracted individuals without specificity, interchangeable and possessed only of the faculty of reason. As well as the textuality of knowledge, what are foregrounded in this way are issues to do with power. There is an appropriate colonial analogy here, since the relationship between knowers and learners can be likened to that of colonisers and colonised. It is the former who define the problem, the nature of the knowledge gathered, the theoretical framework and the categories of analysis, and, of course, who write the final text.[195]

This constructed understanding of the constructed native's point of view is, in an important sense, a fiction, not because it is untrue, but because an interpretation is one of many possible truths. What this points to is that although learning is generally thought of as a process of finding out about the world, there is also a need to take account of the reflexive dimension in learning. Reflexivity is about exploring how meanings, including the meanings given to and generated by learning activities, are discursively constructed within apperceptive and conceptualising processes. One implication of foregrounding reflexivity and discursive construction is the recognition that academic and literary genres interpenetrate each other, and this itself has implications for epistemological questions of validity. Given the embeddedness of representational realism in Western science, there has always been a rigorous exclusion (in the name of rigour) of expressive modes, for example, rhetoric in favour of plain, transparent signification; fiction in favour of fact; subjectivity in favour of objectivity. These expressive modes have been consigned to literature, and so literature becomes the feared and rejected otherness of science which is always necessary to establish

[195] Decolonising as a concept and as a practice is in opposition to the concept and practice of colonising. It is an undoing, a cancelling, a transformation, a going beyond. In short, control over the lives of a people is shifted from one national body, the coloniser, to another, the colonised.

the credibility and very being of scientific knowledge. Literary texts are deemed to be metaphorical and allegorical, expressing inventions rather than observed facts and privileging multiple effects of meaning rather than singular meanings. Above all, they violate referential language and the principle of bivalence, narrating one thing in order to say something else, often of a contradictory nature.

Yet the literary dimension is not so easy to mark off-limits and out of bounds by this construction of otherness, since literary processes – metaphor, figuration, narrative, expressive tropes generally – that select and impose meaning as they translate it, all affect the way in which phenomena are registered, encoded or inscribed. But these literary processes, endemic in all forms of knowledge, yet concealed by an empiricist/positivist metaphysic, not only highlight the rhetorical nature of knowledge development, but also function as devices making possible systematic exclusions that enable the very possibility of truthful accounts of the world. What we have here is yet another hierarchical binary opposition (science–literature), which, when deconstructed, shows the interdependence of the two terms rather than their opposition. The deconstruction of this binary opposition implies, therefore, that knowledge texts do not simply report truthfully. They are not exclusively a written record of what went on in the apperceptive process and what was found out about the world. Rather, they are implicated in economies of truth.

At this point, having mentioned *writing*, it might be appropriate to say something more about the notion of *text*; a notion that is extraordinarily controversial and yet is critical in thinking of ways in which knowledge/learning might be thought of differently. To talk in terms of text, and to conceive of text as a signifying practice, implies that the practice of science, or indeed the practice generally of generating bodies of validated knowledge, requires a self-interrogation, or, to put it another way, it needs to recognise its own cultural embeddedness by being reflexive. Furthermore, the responsibility of any practice that questions itself is that it cannot just challenge empiricist forms of understanding and simply locate itself as post-positivist; it must also take responsibility for itself. It must be political in the sense that it recognises its own implication with power, and accepts the moral dimension that is intrinsic in interpreting the utterances and actions of others.

One obvious impediment to understanding the significance of text in the knowledge-development process is the tendency to understand the term literally, as nothing more than a particular piece of writing. But

beyond this, what also gets in the way of understanding is the substitution of methodology for text. Again, it could be argued that this is an outcome of a failure to problematise representation, since this type of realist metaphysic has accustomed us to privileging methodology. Our intuition is to see it as something whose proper use will guarantee better accounts and, above all, provide the necessary certainty about the validity of knowledge and learning outcomes. But the foregrounding of textuality now makes this uncertain. By thinking in terms of text rather than methodology, we might be more inclined to consider the necessary failure of the certainty that has been methodology's hope, particularly now that the empiricist's dream of finding an innocent and transparent language that will faithfully represent reality has been so thoroughly challenged, or, perhaps we could say, now that it has been deconstructed through the notions of text and discourse.

In conceiving of this possibility, there has been a shift from an emphasis on the real (the independently existing objective world of realism, reality as self-evidently available) to an emphasis on discourses of the real (to the discursive construction of the world that takes place in the apperceptive process, how, in effect, this involves discourses that are the essence of the world while being themselves part of that world; in other words, where reality is no longer self-evidently available). What this means is that we have to question the notion of found worlds and accept that truth is positioned within human activities, the specific discursive practices of life, that while the undermining of empiricism has inevitably meant a crisis of representation, this crisis does not so much signal the end of representation as the end of a metaphysic of pure presence (Derrida, 2016). With the notion of text, writing is directed against the central conviction of this realist metaphysic and of Western culture – the idea of an original, organising centre. The real cannot any longer be seen as an authorising centre of this kind, an unmediated given that grounds a representative validity; the textuality of our knowledge of the world means that it is difficult to keep on thinking in terms of unproblematically representing the world as it really is.

The consequence of this is that as learners, we need to problematise representation so that we can be reflexive about the practices of representation within which we are located; in other words, we need to engage in a signifying practice that questions the grounding and effectiveness of learning and knowledge development as signifying practices. And now we need to go back to methodology, since the problem, as we have seen, is not resolvable by deploying a better methodology,

for example, by being more rigorous and scientific. It is not a question of looking harder or more closely, but of asking what is it that frames our way of seeing when we learn; that is, those areas where visibility is constructed and from which we are incited to see, an incitement that marks the operation of power-knowledge formations in the apperceptive and conceptualising processes, and which makes learning as a signifying practice both post-scientific or post-positivist, and necessarily political.

The implication here is that there is a need to decentre validity from its traditional position as epistemological guardian; from its false position as correspondence of thought with its object. Validity can then alternatively be seen as multiple, partial, endlessly deferred, which can interrupt or disrupt, even if it cannot entirely replace, a validity of correspondence. At this point, it is important to stress that it is not a matter of overthrowing and replacing conventional notions of validity (see Chapter 6 for an account of these notions), since there would then be a danger of transgression itself becoming a new grounding. What transgressive validity does is to remind us that learning is not simply referential. It brings to our attention how the discursive does its work through and with a certain notion of truth, where, because different epistemologies (or truth games) imply different relations between people, establishing truth always involves a power struggle (see Chapter 4). Furthermore, it foregrounds the limits and boundary-marking of disciplinary knowledge, and questions the conventional integrity of the self as a universal learner, seeing this self not as a free-standing rational individual, but rather as a specific subject of difference located in a representational economy.

Criticality

I now want to look at critical approaches to knowledge and learning with a clear awareness that my account will be partial and might well not do full justice to the range of approaches that could be subsumed under the term *critical*. Indeed, that is part of the problem, for the term itself has a complex and confusing range of connotations and applications. This means that there is a great deal of disagreement as to what actually constitutes a critical approach. It tends to be the case that when critical theory is used in its capitalised form (that is, Critical Theory), the reference is to the Frankfurt School of Social Theory founded in the 1930s. The concern of the social theorists associated with the School was

to rethink the meaning of the Enlightenment at a time when the ravages of totalitarianism seemed to be making a mockery of Enlightenment ideals.

It could be argued that all critical theory contains elements of Critical Theory. This is hardly surprising, given the powerful model of the critical forged by the Frankfurt School and its successors[196] and the continuing relevance of the attempt to both critique and redefine modernity. However, this is not to say that all critical theory is simply a gloss on Critical Theory, or that all critical approaches simply comprise modelling and enactment of the tenets of Critical Theory. The notion of the *critical* did not originate with Critical Theory, since it can be a feature of any social theory. The *critical*, however, can be said to be marked by a disengagement from the scientific as conventionally conceived, with an accompanying critique of its distinguishing features, such as objectivity, value neutrality and the strict separation between knowing subjects and objects to be known, or, to put it another way, the self and the world.

Hans-Georg Gadamer (1989) disputed the powerfully held view that the natural sciences provide both the sole model of rationality and the only way of finding truth. For him, scientism makes imperialistic and unacceptable claims on behalf of the natural sciences and their methodology. He argued instead that truth is not captured by scientific method alone, and that the natural sciences do not provide the one single model of rationality. In the idea of a universalistic, abstract model of rationality, there is a forgetting of the conventional nature of reason, its forging in specific historical practices and cultural settings, which means that it is itself in and part of an ongoing network of social beliefs, practices and discourses, rather than outside and separate (see Chapter 3).

It is certainly the case that hermeneutic approaches to the social world repudiate the positivist emphasis upon objectivity and have sought to find a place for the subjective. Yet some of these approaches have also wished to remain within the broad scientific tradition, and to preserve the objectivity of knowledge. Much of this debate revolves around

[196] Some of the most prominent scholars of the first generation of critical theorists were: Max Horkheimer, Theodor Adorno, Herbert Marcuse, Walter Benjamin, Friedrich Pollock, Leo Lowenthal and Eric Fromm. The spiritual successor of the Frankfurt School was Jurgen Habermas, whose work foregrounded the need to reformulate the project of modernity. A third generation of critical theorists included Andrew Feenberg, Albrect Wellmer and Klaus Offe. All of them owed much to the pioneering work of Habermas, and all of them took as the central theme of their writings the inescapable relation between knowledge and criticality.

what objectivity and subjectivity are taken to be.[197] The disagreement is largely about the positivist emphasis on objectivism, or the representational metaphysic of a world fully formed outside the mind of the knower – the separating out of knowing subjects from complete objects in the world. For those who subscribe to an interpretivist or hermeneutic framework, it is not a matter of the world being whatever we want it to be – a position that could be crudely called unthinking relativism. It has sought rather to provide alternative yet epistemologically legitimate approaches to knowledge and learning; in other words, approaches that are still scientific but not positivistic and not captured by this representational metaphysic. Gadamer argues that, for example, knowledge cannot be objective in a positivist sense but must necessarily include a subjective element. Understanding something is always prejudiced in the sense that it is a process of requiring an initial projection that anticipates meaning and which orients the process. This initial projection or pre-understanding is part of the subject's situatedness; the subject's location and standpoint in history, society and culture.

In interpretivism, knowledge and learning take everyday experience and ordinary life as their subject matter, and ask how meaning is constructed and social interaction negotiated in social practices. Human action is inseparable from meaning, and experiences are classified and ordered through interpretive frames, through pre-understandings mediated by tradition. The task of learning then becomes to work with, and make sense of, the world. The process of meaning making and negotiation over meaning is always a practical matter for individuals in the sense that it is located in their social practices. Situations are interpreted and, while these interpretations looked at objectively may be faulty or misleading, they reveal for learners the shared and constructed nature of social reality, which would have been missed had they been objective in a positivist sense. Positivism can therefore be critiqued on the grounds that it fails to understand the multiplicity and complexity

[197] In an earlier part of this book, I suggested that the concept of objectivity (as it is used in the world) contains multiple rather than singular meanings. It is possible to give six different meanings to objectivity, and thus correspondingly to subjectivity, namely: ontological objectivity (that is, something can exist with or without it being perceived by human beings); alethic objectivity (that is, if something meets a set of truth conditions, it is objective); positional objectivity (that is, something is objective when the relevant knowers' traces such as values and interests are excluded); extrinsic objectivity (that is, something is objective if it can be directly accessed through observation – matters such as inner states are not directly accessible, and therefore can be thought of as being subjective); method objectivity (that is, something is objective if its mode of application to the world is correct); and warranted objectivity (that is, something is objective when more than one knower agree on its truthfulness) (Scott and Scott, 2018).

of the life-world of individuals. This life-world is instead reduced to an oppressive uniformity through the imposition of scientific categories. Given, then, that the field of study is the meaningful actions of individuals and the social construction of reality, the social sciences must be distinct from the natural sciences, with different methods, different objects of scrutiny, different ways of explaining and different criteria about what constitutes valid knowledge. Consequently, explaining the social world involves understanding or making sense of it, and this involves understanding the meanings that both construct and are constructed by interactive human behaviour. The goal of knowledge development and learning becomes that of providing interpretations of human actions and social practices within the context of meaningful, culturally specific, arrangements.

Critical learning

Any inquiry has as its starting point the pre-understandings that other people have of what they are learning, simply because we share a world with them. Thus, the purpose which motivates and animates inquiry, the carving out of a field of study and the emergence of criteria and standards by which this study is evaluated are all dependent on the historical situatedness of the investigator, and therefore on the pre-understandings of learners. But this immediately brings us back to the problem of objectivity touched on earlier. How can learners, as interpreters or meaning producers, be objective about the meanings produced by those they are interacting with? Furthermore, how can they themselves be objective in the sense of not falling into arbitrary subjectivism? One answer to this problem has been that, although learners and knowledge-developers must recognise their situatedness, they must also bracket, that is, temporarily suspend, their subjectivity and explanatory frames.

Yet, this position is not altogether satisfactory, and an alternative suggested by Gadamer (1989) shows why. He argues that it is impossible to escape from our pre-understandings, even temporarily. But at the same time, it is precisely through the interplay between our interpretive frames or pre-understandings and the elements of the actions we are trying to understand that knowledge is developed. In other words, our pre-understandings, far from being closed prejudices or biases (as they are thought of in positivist epistemology), actually make us more open-minded, because in the process of interpretation and understanding they are put at risk, tested and modified through the encounter

with what they are trying to understand. So, rather than bracketing or suspending them, we should use them as the essential starting point for acquiring knowledge. To know anything, we have to be aware of our pre-understandings, even though we cannot transcend them. At the same time, however, while they are an essential starting point, they need to be left open to modification in the life-course.

Since knowledge development always involves interpretation within historical and cultural contexts, truths are historical rather than abstract, contingent rather than determinate.[198] Furthermore, they are grasped not by eliminating subjectivity, but through the interactive relationship between the knowing subject and the object to be known. Knowledge is not a matter of subject and object becoming identical, but of them entering into a necessary dialectical relationship. The questions that learners ask arise from their experiences and concerns located in sociocultural traditions. What is involved, then, is a dialogue, or what Gadamer calls a 'fusion of horizons', where knowledge is an unpredictable emergent rather than a controlled outcome. Here an analogy between literary texts and social phenomena is illuminative, since both are complex systems of meaningful elements that are in need of interpretation. Thus, what is involved in understanding is translation, empathy, dialogue, participant observation and 'thick' description. As a hermeneutic inquiry, the learning *raison d'etre* becomes one of working out as many meanings as possible of a complex social life. So, if social phenomena can be read as and like texts, Gadamer argues that understanding a text is only partly a function of the historical situation of the learner, as there is also the subject matter itself, which must be given due weight. In the fusion of horizons, the term, horizon, refers to our standpoint or situatedness (in time, place, culture, gender, ethnicity and so forth), and the standpoint or situatedness of that which we are trying to understand. The fusion results from an understanding which is grounded in both standpoints, neither of which can be bracketed out. We can say that a fusion of horizons occurs when learners and readers, both of whom are historically situated, create shared meanings. Because it is situated, every horizon is inevitably limited, but it is also open to connecting with other horizons (perspectives, standpoints and the like). The resulting fusion is an enlargement or broadening of our own horizon, which leaves open the possibility for continual reinterpretation

[198] This assertion, however, does not and cannot rule out a set of truths that are transcendent or universal (see Scott, 2021). This has some affinities with Ludwig Wittgenstein's (1969) notion of hinge propositions.

and different meanings as horizons move and change. The fusion of horizons constitutes a standard of objectivity which can function as an alternative to the objectivity of a positivist-empiricist epistemology. It is the outcome of inter-subjective agreement where different and conflicting interpretations are played out and possibly harmonised. By comparing and contrasting the various interpretations, a consensus can be achieved despite differences, indeed because of differences.

This implies that there is nothing which potentially cannot be understood. But it also implies that understanding is not simply a knowledge of objects, but also an awareness that everything cannot be systematically known; there are things which just simply fall outside the understanding of positivistic science. Interpretive or hermeneutic understanding is a learning process involving dialogue between knowers and what it is they are seeking to know; a dialogue which is always ongoing and incomplete. The fact that both researchers and those being researched engage in interpretive practices means that the social sciences and social research cannot help but be engaged in a dialogue with their subject matter.[199] In other words, it cannot help but be reflexive, although this is not to say that it always is. This is largely due to the influence of positivism and technical-rationality. Theoretical knowledge is floated off into a context-free vacuum, the matter of knowledge is detached from its locating background, and learners are cast as ideal knowing machines who can know the world only by being outside it, even though they still seek to master it.

The aim of Critical Theory and critical theory is emancipation, so it is critical in the sense that it does not simply seek to generate knowledge of the world as it is, but to detect and unmask beliefs and practices that limit human freedom, justice and democracy, and to engage in action that brings these about. The task of learning and knowledge development is therefore understood as transformative in relation to both individuals and the social world; learning is seen as needing to be part of the process of establishing the conditions for the rational conduct of social life. Jurgen Habermas's (1987a; 1987b)[200] argument concerning the links between knowledge and social interests or basic social needs can also be applied to different traditions of thought, given their role as knowledge producers. The natural sciences and positivist tendencies in the social sciences

[199] In Chapter 7, I sought to show that with inspection, for example, and the subsequent accounting that goes on, there is a requirement for a learning process involving dialogue between knowers and what it is they are seeking to know, and between inspectors and teachers. This is denied in most forms of inspection or evaluation.

[200] And, in addition, Habermas (1978; 1981; 1987a; 1987b).

employ discourses of technical-rationality. Given its instrumental means/ends character, Habermas describes this kind of knowledge as guided by a technical problem-solving interest, where the concern is with generalisation and prediction and the need for control. On the other hand, the interpretive or hermeneutic sciences, including some of the social sciences, employ practical modes of reasoning where methodology does not consist of following invariant procedures and rules of method.

As we have seen, these sciences recognise the significance of context and meaning, and their concern is with understanding and illumination and the need for communication. Yet despite their differences, neither has an interest in changing the world, neither has an emancipatory goal. Habermas therefore identifies a third type of knowledge interest that is associated with Critical Theory. This interest is emancipatory, and it involves the unmasking of ideologies that maintain the status quo by restricting access to the means of gaining knowledge, and hence to the means of raising consciousness or awareness about the oppressive material conditions and structures that lead to the failure to fulfil basic social needs.

Empowerment involves understanding the causes of powerlessness, recognising systemic oppressive forces and acting collectively to change the conditions of life. Critical theory in this sense therefore involves both ideology critique and what Habermas calls the 'organisation of enlightenment', or the taking of rational action on the basis of knowledge. Both ideology critique and the organisation of enlightenment are forms of social learning. The former is learning which functions to transform identities so that individuals see themselves differently, and the latter is learning relating to what needs to be done to change social contexts. One implication of all this, then, is that there can be no objective empirically based knowledge in the sense of knowledge gained from a neutral or perspective-free position. Knowledge is always socially constructed, apperceptively transformed and geared to a particular interest, a technical problem-solving interest, a practical communicative interest or a critical emancipatory interest, and where an interest is manifested through actions informed by different types of rationality.

The critical emancipatory interest seeks to remove structurally rooted obstacles because it is these which give rise to what Habermas (1987b: 169) calls 'systematically distorted communication'. For Habermas, communication is a basic social need. He argues that all human communication implicitly involves the making of validity claims. A communicative transaction involves four such claims: that what is said and done is intelligible, truthful, justified and sincere. Given this,

Habermas argues that undistorted communication involves a situation where all four validity claims can be justified or redeemed; a situation which he refers to as the 'ideal speech situation'. The implication, then, is that communicative transactions should be such as to allow the parties involved to make successful validity claims. It follows, therefore, that the task is to create the right conditions for this to happen; in other words, to create an ideal speech situation.

Habermas sees the ideal speech situation as involving rational agreement reached through critical discussion, an agreement or consensus which can be distinguished from one arising from custom, faith or coercion; a critical dialogue conducted through known public criteria. Here, justifications become explicit as people talk about their reasons for what they do, but not in terms simply of their desires, for example, 'I did X because I wanted to'; or because of the demands of their context, for example, 'I did X because I had to'. In the ideal speech situation, all participants have an understanding of the technical issues involved, coupled with a procedural understanding of how to act appropriately and a competence to participate fully and equally. The ideal speech situation, with its absence of external and internal constraints, is characterised by openness and a commitment to deep explanation, where each learner has an equal chance of participating, and therefore where all validity claims can be successfully redeemed. In this way, any consensus achieved through dialogue will be based on the force of the better argument rather than the force of ideology. In the ideal speech situation, knowledge, truth and emancipation become inseparable. There is a uniting of micro- and macro-levels, for it is clear that the conditions and outcomes of successful inter-subjective dialogue are also the conditions for a successful democratic society.[201]

However, all this poses a difficult problem, for the question arises as to how it is possible to tell whether critical rationality is not itself ideological. Habermas argues that emancipation depends on conducting life rationally, but how is this rationality itself to be justified? What is it that makes critical rationality rational? The problem is compounded by critical theory's challenge to positivist notions of objectivity. Both interpretivists and critical theorists argue that objectivity is not primarily a matter of having the right methods. Both foreground the importance of critical dialogue, one interpretivist version of which is found in the

[201] It is of interest that these conditions for a democratic society are continually under attack by right-wing populists and those embedded in efficiency and effectiveness discourses.

notion of a 'fusion of horizons'.[202] For critical theorists, however, this is not enough, for they want to argue that this dialogue has to be free from and unconstrained by ideology. But where is the ideology-free position to be found to mount a rational critique of ideology?

It is the ideal speech situation that again comes into play as a counter to these difficulties. Habermas argued that the ideal speech situation is presupposed in any discursive context, and that it is an essential element of the critical dialogue which redeems validity claims. Indeed, the very notion of a language makes no sense without some notion of an ideal speech situation. To engage in dialogue while repudiating it is to fall into contradiction. It follows, therefore, that the values and criteria of the ideal speech situation are universal; they are present in any language and any dialogue, and are, in effect, context-free. The ideal speech situation defines a society where all basic social needs have been fulfilled. In this sense, it is counterfactual, but this is not the end of the matter, for the ideal speech situation can function as a norm or regulative ideal, an idealisation of rational practice, even though most actual conditions of social interaction and communication are nothing like this. In this sense, it provides a critical measure of the inadequacies of existing forms of interaction and practices. Thus, actual situations can be examined (an important element of learning anything at all) to ascertain the degree to which they deviate from an ideal speech situation, and appropriate action can be taken to bring them closer to the ideal. But, more significantly than this, the ideal speech situation seems to provide the ideology-free position from which ideology can itself be rationally critiqued. It is universal and transcendent, it provides public and shareable criteria for justifying and choosing, it is objective but not positivistically, and it cannot be denied without falling into substantive contradiction. As such, it provides the rational justification for critical rationality, removing from the latter any accusation that it may itself be just another ideology.

However, the ideal speech situation is rarely, if ever, present, and this poses other difficulties. Should learners and knowledge developers endeavour to bring it about? If it is not to be either an instrument for the further dominance of technical-rationality or for the furtherance of human understanding and communication, then something else is needed. For critical theorists, this something else is praxis or informed, committed action, oriented to change and transformation. Dialogue is a necessary but not a sufficient condition for emancipation, since

[202] This is the Gadamerian version (see Gadamer, 1989).

praxis is also required for realising the latter. This means that learning in the critical theory mode is not simply about finding out or increasing understanding, but also about helping to create the right conditions for critical dialogue and emancipatory action. Learning and praxis become inseparable or, to put it another way, learning becomes praxis. We cannot simply stand aside and adopt a passive disinterested stance; on the contrary, we have to be very much in, and part of, the world we are living in.

The training or instructional dimension of learning, for example, is perhaps the most debilitating of all those knowledge and learning concepts and practices which critical learning is opposed to, and which transgressive learning seeks to replace. Training, as opposed to educative, discourses understand the apperceptive and conceptualising processes of learning as unmediated and direct, with both knowing and learning being fixed and determinate concepts. The critical apperceptive process, on the other hand, is fashioned as mediated, indirect and valorised, and knowing and learning are understood as tentative, endlessly revisable and far from being rule-bound, although learning theorists in the twenty-first century continue their quest to scientise and reify learning objects and learning configurations. In opposition to this came the new pragmatic, semantic and phenomenological educative pictures of the world. These models of learning, then, rather than understanding experience as an input, a precursor, to learning, conceive of the experience of learning as being what learning really is. In addition, they were more successful at incorporating into their worldview, and their view of learning, human processes of intentionality, volition and agency. Training is a deagentising form of learning.

Transgressive learning

The recognition of a conceptual domain of time-oriented change in social phenomena means that generative mechanisms exist that underlie the occurrence of social events. These generative mechanisms may be resistive, oppositional, adversarial and so forth. There is a variety of such mechanisms (the idea of a mechanism is not understood here as mechanistic and determined, but as a set or configuration of objects and object-relations, including those that relate to persons): counter-conductings, emancipations, decolonisations, immanent critiques, readings of the world as a text, decategorisations, absentings, praxis(ings), trans-framings, reflections and textualisations.

These are examples of practical reasoning where the intention is to change a state of affairs in the world.

Michel Foucault (2010: 162)[203] argued for a mode of counter-conducting for human beings. It is an ethic and praxis of relationships, and, for Foucault, it comprises 'the kind of relationship you should have with yourself', and with objects, relations, configurations and persons in the outside world. It acts as a counter and an opposition to prevailing discursive and material object-configurations. People are encouraged to look at their own conduct, not in a condemnatory way, but as a seedbed for personal and political action. In the first instance, this is a process of refusal: 'maybe the target nowadays is not to discover what we are but to refuse what we are' (Foucault, 2010: 336) – there is a refusal being proposed here to accept the grounds on which our subjectivity is being constructed, and a desire to subvert those grounds. At learning sites and in everyday life this would involve a plurality of refusals, resistances and struggles against power, working through a pedagogy of imagination. They involve a denaturalisation of the categories, and they fit with a notion of thought that prioritises as a praxis, as a way of opposing, the meanings that inhere in categories as they are currently operating and in the pedagogic practices that institutionalise and reproduce them.[204]

A more direct form of resistance is a notion of *conscientização* or critical consciousness, and this is a central element in Paulo Freire's (1970) theory of emancipation. A *conscientização* is a response to the oppressive conditions of life for most people. This is an act of learning and, as with all acts of learning, there is a pedagogy involved and a particular arrangement of learning resources to facilitate it. This pedagogy, as Freire understood it, comprises the creation of a set of conditions for the person to realise their own agency, to understand themselves as a person rather than as a material object (discursive, material, relational or configurational). There are essentialist and realist elements here, as well as an acknowledgement that the struggle is not just personal, but also political and social. It happens through work and, in particular, people working on the world. The pedagogy involved is dialogic, and it eschews settings in which there are unequal relations between teachers and learners. Freire also argued that the status quo,

[203] Michel Foucault refused to be categorised as a man: 'my objective, instead, has been to create a history of the different modes by which, in our culture, human beings are made subjects' (Foucault, 1982: 208).

[204] For Foucault (2010: 154), this comprises the challenge of 'creatively and courageously authoring one's ethical self'.

which he called a banking model of education,[205] was counterproductive and regressive. His concern was with intentionality and agency in the process of learning.

Another form of resistance works through decolonisations of knowledge. Self-evidently, decolonising as a concept and as a practice is in opposition to the concept and practice of colonising. It is an undoing, a cancelling, a transformation, a going beyond. In short, control over the lives of a people is shifted from one national body, the coloniser, to what we might want to call the Indigenous[206] people of that nation, the colonised. These colonising and decolonising processes operate within political, social, cultural, epistemological, temporal, spatial, categorising and semantic framings and settings. The process of moving from the one to the other is not straightforward, and it is usually fragmentary and gradual, and generally does not involve a going back to an imagined utopic view of the past. A new sense of nationhood and nationality is being developed. It might also involve an ongoing critique of Eurocentric worldviews and the prioritising of First People's or Indigenous knowledge.

Decolonisations of knowledge or epistemic decolonisations (that is, discursive configurations comprising discursive objects and discursive relations, which have the potential to persist over time) take as their central opposition (it is not this or that …) the perceived universality of Eurocentric knowledge systems. They seek to construct and legitimise alternative epistemologies and epistemological framings. The presumption is that knowledge systems, curricula, categories and so forth are colonised and need to be decolonised. The universality that it is opposed to is replaced by a more apt and convincing sense of universality. Colonial forms of universality determine what can count as legitimate knowledge, and, in effect, exclude, marginalise and dehumanise those with different forms of knowledge, expertise and justification. The colonising process, long or short, extensive or restricted, resulted in a repression of Indigenous forms of knowledge production, of meaning systems, of different symbolic universes, and of notions of Indigenous subjectivities and agencies. Colonialism is a form of exploitation and subjugation, and it exists and works in every crevice and fissure (material or discursive) of the person, her life and her relations with other people, and with other things or objects.

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[205] A banking model of education refers to the metaphor of students as containers or vessels into which educators must pour in or fill up with knowledge.

[206] We have to be extremely careful about how we use the word *Indigenous*, so that it is not understood in any derogatory way.

Political decolonisations in the twentieth and twenty-first centuries were only partially successful, because they ignored the most powerful form of colonisation, epistemic colonisation. Several forms of epistemic decolonisation have been developed, some of which I have referred to above. A first type is that decolonial forms of knowledge are simpliciter oppositional constructs to that which they sought to replace. The process of the construction of knowledge and its justifications is essentially oppositional and reactive. A second type of epistemic decolonisation is to understand colonising epistemic practices as wholly misguided and false, and thus the solution is a cutting out, an erasure (in history and over time), of these malignant constructs. This has to comprise a reversion to what was there before colonisation, a nativist conception. A third form of epistemic decolonisation is not to reject in total those Eurocentric stories, narratives and justificatory principles that are in the history of these colonised peoples, but to build on them, to develop them in local contexts and environments; to create, in short, new epistemic models out of old ones, both Indigenous and colonial.

Another type of resistance is to act through a process of immanent critiquing. Immanent critiques of discursive objects and discursive configurations offer a further perspective on political and epistemic forms of resistance. An immanent critique positions the critique within the object or configuration under consideration, for example, within a discursive configuration such as a learner's rationality and essentialism. These interstices and positionings constitute a particular rendition of an object or an object-configuration, and a commitment to this discursive object-configuration. Adopting an immanent critical approach is to make a judgement, perhaps I can call it a critical judgement, not from any universal or external set of criteria, but from criteria generated within the discursive configuration itself.[207]

The world, and this is shorthand for anything that might exist which is external to our minds, such as other people, mountains, rivers, human activities before we were born, books that were written by people who were not alive when we were born, and thoughts that could not have entered our minds before they did, can be read, understood, appreciated, assimilated as texts, *and* ideological and historical texts as well. Historical and ideological texts can be read in terms of their pre-texts – each social and discursive formation in place and time has its own way of arranging language, discourses and writing. Furthermore, each text has a sub-text,

[207] See Bhaskar (1998).

which operates beneath the text, but which gives it its meaning – those epistemologies and traditions of knowledge which are historical, and which allow a particular reading. Texts refer to observations, evaluations and reflections of discursive and material objects, relational objects, configurational objects of various types, and persons.

Several approaches to reading texts have been developed. The first of these is monosemic, and this means that an authoritative reading can be made of a text. A second approach is also monosemic, but here the primary focus is the intentions of the author. The text allows an unequivocal reading because that reading is consistent with these intentions. A third approach focuses on reading the text and its enframings. The text and the way in which it is read are enframed.[208] There are several solutions to the problems created by the assertion that textual reading is immersed in history and society. The first of these is to accept that any interpretation that is made is partial, and that is as far as anyone can go. The second possible solution is that we can in some way transcend the historicity of our own interpretive stance. Instead of proposing that an unequivocal reading of a text is possible, if we can understand the different contexts and pre-texts of a text, then this in itself constitutes a better way of reading it.[209] A text under this conception can be a life, an episode in a life, an experience in that life, a praxis, a book, a sign, a technology, a feeling or emotion, a framing and an enframing, and much more.

Another form of resistance is an attempt to subvert the categories by which we live. Difference as a concept can be understood in several ways. There is the common use given to the term, where difference is understood as not being or as being opposite to something else – words and signs only have meanings within other arrangements of words and signs, from which they differ. Another way we can understand the idea of difference is by conceptualising it as a particular arrangement or spacing, so that what we should be concerned about is the process that differentiates social elements from other social elements.[210] Processes of classifying and reclassifying change the nature of objects, object-relations and object-configurations. Indeed, all references to the world involve the identification, manipulation, transformation and reconstruction of the categories, and we cannot avoid this.

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[208] As I suggested in Chapter 1, this is a word used by Martin Heidegger (1962), translated from the original German word, *Gestell*, to denote those social, geo-historical, temporal, epistemological, political and discursive frames within which our thoughts and utterances are ineluctably embedded.

[209] Hans-Georg Gadamer (1989) suggested this, although it is not a complete solution.

[210] See Derrida (1978; 1982).

Absenting is another mode of resistance. Roy Bhaskar (2002b) criticised the meta-notion of ontological monovalence, which suggests that reality is only positive and present. He suggested that the positive, in this tradition, undermines the negative or sense of non-being, so that change becomes impossible. By not including the negativity of reality, and by emphasising positivity over negativity, reality can only be thought of as positive, and this implies that unequal relations do not exist, and praxis and change are not necessary. To correct this error, Bhaskar (2008) positioned as central to his work on dialectics, the concepts of absence, negativity and change, asserting that they have real ontological features, such as having causal effects in the world. So, while the notion of negativity was used to indicate nothingness, that is, indeterminate absence, Bhaskar used instead the notion of determinate absence, in the sense that an entity can be absent in terms of not being there in a particular space or time moment, or because it has never existed, or due to its dissolution.

Absence can be positive or negative. While positive absence is a necessary condition of being, for example, silence before speech, negative absence is present in the form of a lack, an ill or a contradiction, such as illness as the absence of health. In general, when something significant is left out of a problem, contradictions and tensions emerge, and, of course, if nothing is done about them, they will proliferate, resulting in a gradual decline into disorder. Looking at what is absent in a specific situation will give us a clue as to how it can change; change is a process of movement in which an object becomes something else and, in the process, ceases to be what it was. In order to restore or resolve these contradictions, Bhaskar (2008) suggested that absences should be absented, and this can be achieved through expanding the totality of objects by adopting more inclusive arrangements.

Absences are ills and constraints on human freedom. Ills can range from being entrenched in the physical body as ill-health, or in false beliefs or in structural ills, such as patriarchal relations. Emancipation, accordingly, is perceived as the removal of absences or constraints, and their transformation into more wanted or empowering structures. Emancipation can be achieved at the individual, the collective or even the universal level. The praxical value of absence for investigating people's emancipation is prioritised. Absences are real because they have causal effects on people's lives. Absenting them starts the process of change and emancipation, since unwanted structures are replaced by more wanted ones; and this alerts all of us to uncover disempowering or unwanted structures. This is a form of praxis, an emancipatory form.

Trans-framing as a form of resistance or counteractivity comprises a movement between onto-epistemological frames or framings, describing them as such because our knowledge of the world always has ontological dimensions. In Chapter 1, I identified a variety of frames or framings that in a transformational sense might enable people to resist or counteract those oppressive forces that are ineluctably a part of modern societies: the frame of molecules and atoms; the frame of associations between variables; the function or use-in-the-world frame; the frame of events; the linguistic frame; the universal hermeneutic frame; the frame of structure and structuring; the semantic frame; and the universal or transcendental frame. These frames, then, are manifestations of difference and, in particular, of the determining difference between the different levels or frames. Framings can be construed as onto-epistemologies. The truth of something or other, as a consequence, is frame-specific, and this includes what many people construe as facts. Deframing or trans-framing, as an act of resistance (and learning), is a movement upwards or downwards or sideways, but always a repositioning of the way we can see the world.

Another form of resistance is practice on ourselves, and this locates the source of practice in individual reflection. This internal conversation has three conditioning structures. The first is that it is a genuinely interior phenomenon, and this implies that we have private lives. The second conditioning structure is that this sense of a person's subjectivity has a first-person ontology – it relates directly to a particular person. The third conditioning structure is that it possesses causal powers, in that material and discursive consequences could follow directly from particular internal conversations.

This is a notion of reflection, or even reflexivity, which is a way of saying that a person can be disposed to reflect back on herself. Here, the life of the mind is characterised by an internal conversation that is a part of the whole process of learning. The second type of reflexive action can be called autonomous reflexivity, and here the processes of the internal conversation are foreshortened and may be automatic and involuntary, insofar as they lead to actions. Then there are meta-reflexive processes, in which the principal focus is the internal conversation; interiorisation and exteriorisation processes are marginalised. There may also be fractured reflexive processes, in which the interrogation by one part of the mind of another part does not proceed smoothly and coherently, leading to the learner being distressed and disorientated.[211] However, the most important form of resistance in learning is praxical.

[211] See Archer (2002; 2007) for an account of reflexivity and the internal conversation.

Praxis

Praxis is not just action, for this would render the concept as meaningless insofar as everything we do in the world would be a praxis. It involves some form of conversion of thought into action, or at least the construction of a particular thought or set of thoughts in such a way that certain actions inevitably flow from it and other actions are set aside. As with all thoughts or thinking, this praxis is embedded in histories, archaeologies and genealogies of that thought or concept, and what that thought or set of thoughts allows or disallows. Praxis has four elements: practice on practice, practice on thought, practice on ourselves, and practice unfolding from thought. The first of these refers fundamentally to doing something in the world, such as the various campaigns for gay rights[212] in the UK over the last thirty years – those activities evolved in scope and form over the period of the activity. The second refers to thought working on the practice of thought over a period of time, and in response to a particular conceptual problem such as patriarchy.

The third possibility is practice on ourselves, and this locates the source of practice in individual reflection. I have already suggested that an activity of the mind can be construed as a notion of inner speech, where parts of the mind talk to, or communicate with, other parts of the mind. Reflexivity can be consequently thought of as an emancipation. There is a fourth sense that can be given to the notion of praxis, and this is where work on thought drives practice in a particular way – thought and practice are so intertwined that in criticising or subverting the one, we are also criticising and subverting the other. An example of an object-relation or object-connection operating at the discursive level over time is the relation between a theory or set of propositions about objects, relations and arrangements of objects – how they might work in the world – and a set of future arrangements of objects and relations in the practice setting (from description to practice). For those of us concerned to provide accounts of curriculum, knowledge and learning, conceptualising the relationship between the theory we produce and the practice we are describing is central to our activities. In short, how this relationship is understood is important, both because it affects the type of account produced and because it impacts upon the workings of practices per se.

[212] The gay rights movement was successful, or at least partially successful (there is more work to do), because of (among other reasons) their appropriation of the word 'gay', from an adjective meaning carefree, loose morals and sexual licentiousness to its use in the world to describe a particular form of sexuality in a positive way (see Chapter 10).

The first of these understands science as the final arbiter of truthful accounts – the relation is therefore categorical. There is a correct method for collecting data about learning activities, with this method leading to the creation of objective, value-free and authoritative knowledge about how practitioners should behave. Practitioners (and, in a sense, this includes all of us) therefore need to bracket out their own values, experiences and preconceptions, because these are partial, incomplete and subjective, and follow the precepts of theorists whose sole purpose is to develop knowledge that transcends the local and the contextual.

The second praxical viewpoint has some similarities to the first viewpoint, but it understands the creation of objectified and authoritative knowledge in a different way. The learning script that is produced is still treated in the same way as with the first perspective, but the relationship between theory and practice is understood as being in accord with a technical-rationality framework. This involves the solving of technical problems through rational decision making. It is the means to achieve ends, where the assumption is that the ends to which practice is directed can always be predefined and are always knowable. The condition of practice is the learning of a body of theoretical knowledge, and practice therefore becomes the application of this body of knowledge to achieve pre-set ends. In subscribing to this learning viewpoint, we have to commit ourselves to the possibility of developing transcendently objective and true knowledge

The third type of theory–practice relationship is multi-perspectival and multi-methodological. If there is no correct method, but only a set of methods that produce texts of various kinds, and if these can be read in different ways, then the practitioner is required to make a series of decisions about whether a text is appropriate or not. Theory and practice are here being uncoupled. Whether or not the practitioner works to the prescriptive framework of the theorist will depend on several factors, such as the fit between the values of the theorist and the practitioner, whether they share a common epistemic framework, and, fundamentally, whether solutions are being provided by the theorist to practical problems encountered during the practitioner's everyday activity.

A fourth position that can be taken is an extension of the position expressed above. This is an interpretation of the theory–practice relation in which deliberated thoughtful practice is not just the target, but is also the major source (perhaps the specifying source) of social theory and explanation. This is, in effect, a rejection of a role in practice for the theorist because they operate outside the practice. Practice is understood

as deliberative action concerned with the making of appropriate decisions about practical problems in the practicum or practical setting.

These four discursive formations offer alternative perspectives on an important aspect of social life. What has become a commonplace in the development of public policy over the last thirty years is the sense in which there has to be a binding relationship between theory and practice; but, in reality, practice in the educational and social spheres is the outcome of political deliberations, detheorisations, knowledge distortions and unforeseen events and occurrences. This book, and indeed this trilogy of books,[213] has been about learning, about being and becoming a learner, and about resisting those forms of learning which we might want to describe as regressive, empiricist and incarcerating.

[213] Scott (2021; 2024; and the present volume).

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'Written with the exemplary rigour, clarity and incisiveness that are now trademarks of his, David Scott cements his reputation as one of the world's leading philosophers of education. Those who wish to learn about learning are much in David's debt.'
Ronald Barnett, UCL

'This third book in Scott's series on theorising and discussing the lived experience as learning offers a comprehensive capstone to his work. The book shares with the others his perceptive, imaginative and informed scholarship in a well-argued and original text.'
Paul Gibbs, Middlesex University

'Like the two previous volumes in this series this book is a radical inquiry in the sense that it probes the rich depths of the innumerable ways human beings relate to a complex world.'
Tone Saevi, VID Specialized University, Norway

This book, as you can see from its title, is about learning, or at least about the concept and practice of learning. It focuses on two foundational concepts, knowledge and learning, the relationship between the two, and the way these can be framed in epistemic, social, political and economic terms. This book explores a number of important meta-concepts that relate to the idea of learning, such as epistemology, semantics, rationality, thinking and pragmatism, and meso-concepts such as *Bildung*, bureaucracy and ethics.

On Learning, Volume 3: Knowledge, curriculum and ethics, like the first two volumes, is a response to empiricist and positivist conceptions of knowledge. The author argues against detheorised and reductionist ideas of learning that have filtered through to the management of our schools, colleges and universities, over-simplified messages about learning, knowledge, curriculum and assessment, and the denial that values are central to understanding how we live and how we should live.

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