

Chapter 5: A Critique of the Conceptual Foundations of Economic Fundamentalism

‘I perceive,’ said the Countess, ‘Philosophy is now become Mechanical.’
‘So Mechanical,’ said I, ‘that I fear we shall quickly be asham’d of it; they will have the World to be in great, what a watch is in little; which is very regular, and depends only upon the just disposing of the several parts of the movement. But pray tell me, Madam, had you not formerly a more sublime Idea of the Universe?’

— Bernard le Bovier de Fontenelle¹

The word Reason, and the epithets connected with it—‘Rational’ and ‘Reasonable’—have enjoyed a long history which has bequeathed to them a legacy of ambiguity and confusion.

— Michael Oakeshott²

Introduction: The Contemporary Epochal Transformation in the Western Mind

In the previous chapter, I provided a brief historical account of the social-contract tradition on which economic fundamentalism rests. In the next three chapters, I propose to extend that critique by looking at the epistemological foundations of that tradition in the cultural and philosophical movement called ‘the Enlightenment’. I will criticise its belief that reason and the scientific method can provide us with certain geometric knowledge of the natural and social world, concentrating in particular on the grossly exaggerated claims of rationalism and its tools. In the next chapter, I will extend that critique to positivist scientific beliefs, pointing out that science and social inquiry are only fallible human activities always subject to revision. I will then move in Chapter 7 to a discussion of the normative nature of social inquiry and to criticise claims to normative expertise. The effect of these three chapters taken together is to undermine the claims of social science and political and moral philosophy to a privileged position in the determination of government action.

The Enlightenment was central to the breakdown of the synthesised Ptolemaic–Aristotelian conception of the world. That particular synthesis—that paradigm, that intellectual trajectory—had not only provided the master narrative and the conceptual basis of the medieval world, it had informed Western philosophical, religious and scientific understanding for about 15 centuries.³ Let me emphasise that influence again, lest its significance passes us by. The synthesised Ptolemaic–Aristotelian conception of the world provided

the very basis of the medieval experience of reality. Incredible though it might seem now, that medieval Christian experience of reality was not only different from our understanding, it was as tangible, complete and self-evident as our modern experience of an impersonal and material objective reality, or as the ancient Greek experience of an even more 'mythical' reality.⁴

The Enlightenment, then, involved a radical cultural change, sweeping away what was said to be superstition and tradition and promising progress, equality, freedom and justice. This involved the formation of a new cosmology, which provided a new explanatory archetypal story and a different reality. This is the reality formed by the Newtonian world-view in which the universe is viewed as a machine—a self-sufficient mechanism involving the interaction of matter and forces—lacking purpose and meaning. It was only with Enlightenment thinkers such as Bacon, Descartes and Newton that the idea first emerged clearly that there were laws governing the natural world and that it was the role of natural philosophers or what we now call scientists to discover them. The earlier theory of scientific explanation developed by Aristotle was essentialist and had no room for such a concept.⁵ As we will see later, this mechanical world-view still lies at the heart of contemporary economic thought, which seeks to model human beings and their interactions as a mechanical system.

We might note in passing that the fact that such different conceptions of fundamental realities have been held in all seriousness by people every bit as intelligent as us, should warn us against placing excessive confidence in our current intellectual constructs and the stories we tell about them. While we might have better institutions for checking knowledge claims, these cannot guarantee freedom from error.

Habermas, in his qualified defence of the Enlightenment, describes the project of modernity as

the effort to develop objective science, universal morality and law, and autonomous art, according to their inner logic. At the same time, this project intended to release the cognitive potentials of each of these domains to set them free from their esoteric forms. The Enlightenment philosophers wanted to utilise this accumulation of specialised culture for the enrichment of everyday life, that is to say, for the rational organization of everyday social life.⁶

Habermas believes that this project has unrealised potential for increasing social rationality, justice and morality. Contrary to Habermas—and as we will see below—many contemporary theorists see the Enlightenment story as having greatly diminished the apparent significance of humanity itself, its rational and volitional freedom and the emotional, aesthetic, sensory, imaginative and intentional qualities that had seemed most constitutive of the human experience

until that time.⁷ While the Enlightenment story placed rationality on a pinnacle, the conception of reason itself was narrowed. The classical notion of reason as a divine gift involving a normative dimension was displaced and reason was reduced to instrumentality and deductive logic. Indeed, human decision making was reduced to a mechanical system. In this scheme, the life of the imagination and the emotions was discounted along with judgement, experience and wisdom.

A substantial literature has now developed questioning many of the claims of this Enlightenment tradition, which leading contemporary French philosopher Jean-François Lyotard (1924–98) calls the mood of modernity, and its associated grand narratives—the grand, large-scale theories and philosophies of the world, science, history, progress and freedom. These narratives are the stories our culture tells itself to legitimise its practices and beliefs, and which purport to grasp the truth, including the truth about society and—drawing on Wittgenstein—its language games.⁸ In his critique, Lyotard tells us: ‘In contemporary society and culture—postindustrial society, postmodern culture—the question of the legitimation of knowledge is formulated in different terms. The grand narrative has lost its credibility, regardless of what mode of unification it uses, regardless of whether it is a speculative narrative or a narrative of emancipation.’⁹

These grand narratives are unable to contain our diversity, our incommensurable beliefs and us. Hence, for example, Lyotard rejects totalising social theories that are reductionist, simplistic and even ‘terroristic’.¹⁰

Similarly, American sociologist Richard Madsen and his colleagues warn us that:

There is a painful contradiction between what modernity promises and what it delivers. It promises—indeed demands—intellectual, moral, and political emancipation. Yet it delivers an iron cage...Morality, religion, and the whole normative dimension of social life get either pushed away or explained away...What goes typically unnoticed and unremarked [on] is how this apparent straightforward approach locks its adherents into a closed universe of diminished meaning and possibility.¹¹

Of particular concern to this account is the extent to which the attempt by libertarian philosophers in the Enlightenment tradition to legislate a particular negative interpretation of individual freedom and their adulation of markets are threatening to again enslave us all.

Importantly, one of the defining moments of recent consciousness has been the recognition that the social and religious order is a human construction for which we ultimately have to take responsibility. This recognition prompted leading thinkers such as Friedrich Nietzsche (1844–1900), Michel Foucault (1926–84), Jacques Derrida (1930–2004) and Pierre Bourdieu (1930–2002) to attempt to dismantle the values defining modernity itself: reason, freedom and the

autonomous self. Nietzsche—perhaps the first of the existentialist philosophers—was highly critical of contemporary German culture, dogmatic systems in philosophy including those of Plato and Kant, claims to truth and God as a single, ultimate, judgemental authority. In this spirit of questioning, he challenged the foundations of Christianity and traditional morality. He saw these dogmatic systems as inventions and conventions providing repose, security and consistency.¹² Foucault challenges the ability of the human sciences to offer universal scientific truths about human nature. He sees those claims as often being mere expressions of ethical and political commitments of a particular society—the outcome of contingent historical forces rather than scientifically grounded truths.¹³ Foucault has, therefore, undermined the claims of the human sciences to neutrality by showing how the drive towards freedom and autonomy is an extension and deepening of practices of power.¹⁴ Derrida, for his part, questioned the self-evident, logic and non-judgemental character of the dichotomies by which we live, such as legitimate/illegitimate, rational/irrational, fact/fiction or observation/imagination.¹⁵ He sees these dichotomies as being defined culturally and historically and even reliant on one another, rather than being conceptual absolutes with stable meanings. Similarly, Bourdieu attempts to show that the things that are sacred to modern elites are social constructions and he tries to expose the hidden means by which the powerful and wealthy assert superiority¹⁶ and reproduce themselves.

In summary, this questioning has discredited the story that has been told about knowledge since the Enlightenment. This is not to deny the achievements of the past few centuries in increasing our understanding of the natural world and in freeing us from some of the grosser superstitions that worried the medieval mind and which provided the justification for many unspeakable crimes—particularly at the hands of the Christian Church. Neither is it intended to diminish the enormous contribution of liberal and socialist thinkers and activists in the Enlightenment tradition in advancing the emancipation of ordinary citizens—a hope Habermas continues to entertain. Nor is it intended to deny the enormous improvement in average living standards in recent centuries. Nevertheless, and paradoxically, the Enlightenment, in its advocacy of radical scepticism in the cause of human emancipation, is seen increasingly as being bankrupt,¹⁷ as having undermined its own story¹⁸ and as having created a Kafka–Beckett-like state of absurdity and existential isolation.¹⁹ Having undermined belief in God, society and tradition, radical scepticism has undermined belief in belief itself, including belief in reason.

In the process, most contemporary philosophers have rejected the views of Descartes, the father of modern philosophy, and his quest for an Archimedean fixed and immovable point on which to ground our knowledge—a grounding he thought he had found in his existence and his ability to think, certified by

a non-deceiving God.²⁰ This just wouldn't do in the absence of a non-deceiving God and in the face of the realisation that the language of argument presupposed what he was trying to prove. What is more, that language is a continuing social construct. Nor will it do to erect reason or nature as God substitutes. The moment one admits God, again, one also admits revelation as the source of knowledge superior to reason.

In relatively recent times, the search for absolute knowledge manifested itself in an extreme form in logical positivism, which viewed science as the ultimate arbiter of truth in a heroic struggle against ignorance and superstition.²¹ As such, it was a utopian attempt to legislate what constituted scientific knowledge. Such scientific truth, it was claimed, was discoverable only by the enlightened mind cleansed of metaphysical beliefs. It could then set us free from the shackles of tradition and its associated institutions and build a new and better world. As we saw earlier, this optimism reflected a strong faith in progress and the perfectibility of humankind.

French philosopher Claude Saint-Simon (1760–1825), writing in the Cartesian tradition, had great faith in science and in industrialisation and advocated the reorganisation of society on positive scientific lines. Nevertheless, Auguste Comte (1798–1857), his secretary, is usually seen as the father of positivism. Comte had a similar faith in the power of science, particularly sociology, to advance human civilisation. He built his philosophy of positivism as a universal system around that faith. The logical positivists centred on the Vienna Circle of the 1920s and 1930s, building on Comte's ideas, sought, in particular, to differentiate science from other thinking. They claimed that it was only through positivist scientific thought that a true view of the social and physical world was possible. This is truly a foundational project in the Enlightenment tradition.²² This story involved four main beliefs:

- the only things that are real are the things that are observable
- all general names are only summary abbreviations for the numerous objects in reality
- it is possible to distinguish between facts and values and consequently to have a social science that is factual and devoid of values
- there is a unity of method between the natural and social sciences.²³

These claims exercised a profound influence on philosophy and the philosophy of science from the 1920s to the 1950s and in the associated idealisation of formal theory. Most contemporary philosophers have, however, rejected logical positivism. In the words of leading contemporary Australian philosopher John Passmore, 'Logical Positivism...is dead, or as dead as a philosophical movement ever becomes.'²⁴

Philosopher of science Karl Popper (1902–94) even claimed to have done the killing:²⁵

[T]hroughout my life I have combated positivist epistemology, under the name of ‘positivism’...I have fought against the aping of the natural sciences by the social sciences, and I have fought for the doctrine that positivist epistemological is inadequate even in its analysis of the natural sciences which, in fact, are not ‘careful generalisations from observations’, as it is usually believed, but are essentially speculative and daring; moreover, I have taught, for more than thirty-eight years, that all observations are theory-impregnated, and that their main function is to check and refute, rather than to prove, our theories. Finally I have not only stressed the meaningfulness of metaphysical assertions and the fact that I am myself a metaphysical realist, but I have also analysed the important historical role played by metaphysics in the formation of scientific theories.²⁶

Two other leading philosophers, Willard Quine (1908–2000) and Thomas Kuhn (1922–96), are often also given the credit for killing positivism; and the foundational idea that philosophy can determine on a priori grounds the standards for scientific knowledge died with it. Indeed, the positivist ideal of a universal and substantive ‘logic of science’ was simply misguided.²⁷ Similarly, positivism’s attempt to divorce science from metaphysical beliefs—beliefs that attempt to describe the ultimate nature of reality—has failed. We will go into this in a little more detail shortly.

This turning away from the Enlightenment and modernity involves a rejection of the claimed privileged status of science and of rationality, the belief in universals—absolute truths, universal values and a common human nature—and in progress and in the perfectibility of humankind. In particular, there can be no final appeal from an objective viewpoint to an attainable ultimate truth.²⁸

Importantly, respected American cultural historian Richard Tarnas believes a great epochal transformation comparable with that of the Enlightenment is occurring in the Western mind in reaction to the dissolution of the foundations of the modern world-view, which has left us bereft of certainties.²⁹ Contemporary Australian theologian Duncan Reid sums up this dissolution very well.³⁰ For Reid, this paradigm shift has two interrelated aspects. The first involves a shift away from Western political, cultural and economic predominance. The realisation that other cultures—which are also enjoying rapid improvements in material welfare—have fundamentally different perspectives on the human condition has led to a questioning of our fundamental cultural assumptions. This shift is accompanied by a change within the Western scientific world-view and a sense of disillusionment with the technology it has given us. In particular, the Newtonian mechanistic world-view has been

undermined because Newtonian physics has been discredited completely as an answer to any fundamental question about the nature of the world.³¹ That view is not just limited as an explanation of physical reality; it is fundamentally flawed, however much it might continue to serve as a convenient fiction in describing the behaviour of relatively large objects—the sorts of objects that we perceive around us.

At a deeper level, physics has come to understand reality, not in terms of atomism—discrete particles that can be described independently of all others—but as a complete network, the most basic elements of which are not entities or substances, but relationships:

All entities, even inanimate entities, constituted as they were by their ‘experiences’ of being in relationship, could now be understood as subjects which adapt to their environment. Reality was no longer to be ‘grasped’ solely by analysis and reduction to component parts. Understanding had to be reinterpreted in a less dominating, more participatory way, as the perception of parts interacting in the context of an indivisible totality.³²

No longer are the properties of things seen as being fixed absolutely with respect to some unchanging background, rather they arise from interactions and relationships.³³ As renowned mathematical physicist Roger Penrose (b. 1931) confirms, the fundamental entities in physics are not events in space and time but rather processes, and space and time emerge only at a secondary level.³⁴ Thus the idea that ‘science’ can view the world from outside—as a disembodied observer—has been discredited. Similarly, the reductionist method—in which phenomena are simplified until they can be described by simple mathematical equations—is undermined. Even the Platonic view of natural laws as eternal and absolute has been questioned, along with any simple idea of causality.³⁵

The second aspect of this paradigm shift has been a crisis of meaning in Western epistemology:

The whole Western philosophical tradition had worked on the assumption that knowledge...was accessible through language. But now the word...has been unseated from its place of honour. Language, rather than an inadequate but in principle perfectible attempt to refer to some intelligible metaphysical reality beyond itself, has come to be seen as a self-contained system in which reference is to the system itself.³⁶

The common thread in these two crises is the loss of any sense of objective certainty in the physical sciences or in political-cultural matters. As a consequence, we have to deal with a new and profound sense of historical relativism and the belief that there can be no overarching ‘absolute’ or unifying principle that can reconcile all the relativities of human thought and experience.

Additionally, we are shifting from a particular privileged explanatory paradigm—the Newtonian world-view—to a world in which there is no privileged perspective and no privileged archetypal story, a world full potentially of existential uncertainty, even terror.

More optimistically, for American pragmatist Richard Bernstein, these crises are creating a public space in which basic questions about the human condition can be raised anew.³⁷ Specifically, Bernstein believes that there is something wrong with the ways in which questions in relation to rationality have been posed in the past, and he points to a need for the conversation to move beyond objectivism and relativism. He believes that what he calls the attacks on the tyranny of method open the way to a new conversation on rationality and to ‘a more historically situated, non algorithmic, flexible understanding of human rationality, one which highlights the tacit dimension of human judgment and imagination and is sensitive to the unsuspected contingencies and genuine novelties encountered in particular situations’.³⁸

Similarly, Tarnas tells us that the dissolving of old assumptions and categories could permit the emergence of entirely new prospects for conceptual and existential reintegration with richer interpretive vocabularies and more profound narrative coherencies.³⁹ He warns us, however, that in the absence of any viable, embracing cultural vision, the old assumptions remain in force, providing an increasingly unworkable and dangerous blueprint for human thought and activity.

The Excessive Western Faith in Objectivism

What we have arrived at is not some minor esoteric quibble but a fundamental attack on the foundation of our fundamental beliefs: the Enlightenment tradition and its world-view. The belief that we have access to absolute and unconditional truths about the world, *epistēmē*, has been a fundamental belief of much Western philosophy since the ancient Greeks. This belief—this myth, this passion, this story—could have originated with Pythagoras (569–475 BC) and Parmenides (b. 510 BC). Plato (427–347 BC) and Aristotle (384–22 BC) elaborated this belief in different ways. It has been shared by the rationalist and empirical traditions until recently. These traditions differ only in their account of how we arrive at such truths.⁴⁰ The rationalists—the followers of Plato—believe that only our innate capacity to reason can give us knowledge of things as they really are, whereas for the followers of Aristotle—the empiricists—all knowledge of the world arises from our sensory perceptions. As we will see shortly, however, Aristotle did not extend that idea to moral beliefs.

Nevertheless, Western art, literature and philosophy have all shared the idea that, beyond the empirical, mundane realm lies a greater reality—some version of Plato’s forms—-independent, immovable, permanent and absolute. This

transcendentalism—a synthesis of Greek and Christian thought—has shaped the reality in which Westerners live. Even for Aristotle with his strong empirical bent, human beings could apprehend infallible truth because, he believed—along with Plato—that we shared in the divine mind. One consequence is that institutionalised authority structures in the West are always legitimised by invoking abstract transcendental justifications: God or, more lately, natural law, reason, method, a generalised will of the people or human rights.⁴¹

This transcendentalism lies at the heart of the Enlightenment project and its search for a certain, ahistorical foundation for knowledge, truth, rationality and morality. In the Christian tradition, the transcendental absolute—the source of certainty—was the decree of an anthropomorphised God. Through the Enlightenment, however, God was gradually secularised,⁴² to be replaced with nature, natural laws, reason and method, which continued to occupy a transcendental level, governing the way things should be and providing us with access to absolute truth.⁴³ As the following account will make clear, however, there are no Platonic forms of truth, law, reason and method or, indeed, of the market, to which we can appeal. Nevertheless, for most contemporary Westerners, this Enlightenment tradition continues to provide their fundamental understanding of the world and their vocabulary of legitimation. Similarly, the right to teach is still defined by the teacher's special knowledge of a universal message.⁴⁴ Since the Enlightenment, however, the guardian of truth and justice is no longer the priest, but the intellectual claiming special insight into reason and the world—and a special right to speak for humanity. Plato and his disciples rather than God certified this new magisterium. Tragically, Plato's totalitarian vision has promoted the very intellectual arrogance that his teacher, Socrates (469–399 BC), sought to deflate at the cost of his life.

In contrast with the West, the Confucian civilisations of South-East Asia do not conceptualise a meaningful level of human action and causation beyond the world of experience.⁴⁵ This is because Chinese cosmology lacked monotheism and a transcendental level.⁴⁶ The Chinese even lack a word for God. Instead, there was a cosmological ordering of the world, represented by the harmonious hierarchical interrelations of the heavens, earth and mankind—a notion of order that excluded the Western notion of law. In the Chinese world-view, the harmonious cooperation of all beings arose from the fact that they were all parts in a hierarchy of wholes, forming a cosmic pattern. What they obeyed were the internal dictates of their own natures, not the orders of a superior authority external to themselves. In the Chinese tradition, there is no God, or God-given laws, and no transcendental level that leaders can use to justify their claims to power. Consequently, a different vocabulary of legitimation was developed—a vocabulary in which justifications for power were based on the requirements

for natural harmonies in this world. Power over another was justified in terms of one's obedience to one's position in a universal relational order.

One of the leading philosophical critics of modernity, Stephen Toulmin,⁴⁷ links the origins of the Enlightenment and its obsession with foundations for objective knowledge to the rise of the nation-state and to the general state of crisis in seventeenth-century Europe. He explained that between the fourteenth and the sixteenth centuries, Europe experienced a rebirth—'the Renaissance'—in which the classical learning of the Greeks and Romans was rediscovered, substantially expanding the horizons of the Western medieval world. In particular, this learning increased understanding of the wide diversity and contextual dependence of human life and brought recognition that theoretical inquiries needed to be balanced against discussions of concrete practical issues.

In this regard, Tarnas reminds us that the Renaissance built on an earlier scholastic awakening that was stimulated in part by increased contact with Byzantine and Islamic centres of learning and the rediscovery of a large body of Aristotle's writings. This awakening was aided by technological innovations, which had increased productivity and had highlighted the value of human intelligence in mastering the forces of nature and acquiring useful knowledge. These scholastics prepared the way in the late medieval universities for the Enlightenment and the scientific revolution. Aquinas, in particular, drawing on Aristotle, denied the capacity of the human intellect to know directly Plato's forms—believing instead that we needed sensory experience to acquire an imperfect but meaningful understanding of things in terms of such eternal archetypes. In turn, Franciscan philosopher William of Ockham (1288–1348) contributed to the further breakdown of the medieval view by denying the reality of such Platonic universals outside the human mind and human language and claiming that speculative reason and metaphysics lacked any real foundations.⁴⁸

These trends tended to undermine the claims of Christian revelation, as they had been understood, and, importantly, the Church's spiritual authority. These trends were helped further by the expansion of the universities, the invention of printing and an associated enormous increase in literacy and learning, eroding the monopoly on learning that had long been held by the clergy. Importantly, it also eroded the claimed authority of the Christian Church to interpret scripture. About the same time, Nicholas Copernicus (1473–1543) undermined the Ptolemaic image of the physical universe with his heliocentric theory. Galileo Galilei (1564–1642), Johannes Kepler (1571–1630) and Newton built on this work to create the new cosmology—the Newtonian cosmology that is at the centre of the modern world-view.

One result of the rediscovery of classical learning and the associated intellectual ferment was that religious Renaissance humanists such as Michel de Montaigne

(1533–92) and Desiderius Erasmus (c. 1469–1536) came to believe that we could claim certainty about nothing and that philosophical speculation reached beyond the scope of experience in ways that could not be defended.⁴⁹ This acute awareness of the limits of our practical and intellectual powers—in particular of our ability to reach unquestioned ‘truth’ or unqualified ‘certainty’—discouraged dogmatism. Accordingly, Montaigne warns us that ‘it is to place a very high value on your surmises to roast a man alive for them’.⁵⁰

Consequently, these philosophers showed a new, open-minded, sceptical tolerance along with practical doubt about the value of theory in such fields as theology, natural philosophy, metaphysics and ethics. Toulmin tells us that this uncertainty reflected the attitude of Aristotle for whom the good had no universal form, and for whom moral, sound judgement always respected the detailed circumstances of specific kinds of cases.⁵¹ For Aristotle, ethics was not a field for theoretical analysis but for practical wisdom: *phronēsis*. This humility was part of the price of our being human and not gods. As a result, throughout the Middle Ages and the Renaissance, it had been understood that problems in social ethics were not to be resolved by appeal to any single and universal tradition. Rather, multiple considerations and coexisting traditions need to be weighed against one another using all the available resources of moral thought and social tradition.

In contrast, the dream of the Enlightenment—of seventeenth-century philosophy and science—was Plato’s demand for *epistēmē*, or theoretical grasp. This Platonic dream remains at the heart of our contemporary over-valuation of theoretical speculative stories in public policy formation. The Renaissance brought with it an increased understanding of the Platonic tradition and a neo-Platonic revival not unlike the earlier rediscovery of Aristotle. In particular, it brought with it a renewed interest in the Pythagorean vision of a universe ordered in accordance with transcendent mathematical forms.⁵² Galileo believed that God—‘the great Geometer’—had written the book of nature in mathematical symbols. Descartes—a considerable mathematician as well as a scientist and philosopher—similarly conceived of the universe as an atomistic system governed by a few mechanistic rules. He set himself the task of discovering an irrefutable basis for certain knowledge. This he sought to do by scrapping inherited concepts and starting again, using rationally validated methods having the necessity of geometrical proofs. In this Cartesian program, logical analysis was separated from—and elevated far above—the study of rhetoric, discourse and argumentation: ‘In Descartes’ vision, science, progress, reason, epistemological certainty, and human identity were all inextricably connected with each other and with the conception of an objective, mechanistic universe; and upon this synthesis was founded the paradigmatic character of the modern mind.’⁵³

Importantly, as Toulmin explains, such certainty was attractive given the general state of spiritual, intellectual and political crisis in seventeenth-century Europe,

in reaction to such events as the assassination of the tolerant King Henri IV of France in 1610 and the Thirty-Years War (1618–48) between most of the major European continental powers.⁵⁴ Loy emphasises the viciousness of this war and of the underlying religious conflict over what was seen as humankind's eternal destiny.⁵⁵ The increased emphasis on biblical teaching and the ensuing conflict over interpretation undermined biblical authority as a source of political ideas and promoted a resort to reason as an alternative source of authority. Similarly, Tarnas draws our attention to the chaos in the cultural and intellectual life of Europe resulting from the violent disputes between ever-multiplying religious sects over whose conception of absolute truth would prevail. These events undermined tolerance as a way of defusing denominational rivalry, led to an active distrust of unbelievers and to a belief in belief itself. In this climate, it became urgent to discover some rational method of demonstrating the truth of philosophical, scientific or theological doctrines, particularly the theological doctrines.

Interestingly, Loy, drawing on Arnold Toynbee (1889–1975), links the concurrent growth of nationalism—which he sees as the worship of the deified community—with this sense of crisis. He believes nationalism provides one unconscious secular alternative religion after the breakdown in the authority of the Christian Church and the ensuing growth in the sense of insecurity.⁵⁶ Furthermore, he believes that the modern nation-state continues to derive its power over us from our need to identify with and ground ourselves in something greater than ourselves.

In the event, as Toulmin tells us, Galileo in physics, Descartes in epistemology and science and Hobbes in political theory committed Western society to new and 'scientific' ways and to the use of more 'rational' ways of dealing with the problems of life and society. They assumed that there were uniquely rational procedures for handling the intellectual and practical problems of any field of study—procedures that involved setting aside superstition, mythology, authority and tradition, and attacking problems free of local prejudice and transient fashion, on the authority of reason itself. In this hope to bring all subjects into formal theory, the Enlightenment philosophers also altered the language of reason itself in subtle ways. In particular, they became committed increasingly to abstract universal, timeless theories, setting aside serious interest in the different kinds of practical knowledge: the oral, the particular, the local and the timely (and, I would add, the personal).

In particular, moral philosophy followed the theoretical road of natural philosophy, relegating practical ethics to second place. It set about clarifying and distinguishing the concepts of ethics and formulating the universal, timeless axioms that it assumed must lie at the base of any rational system of ethics. As a result, dogma acquired an imperative sense, with moral questions having

unique, simple and authoritative answers. Similarly, academic jurisprudence developed formal and theoretical goals. In political theory too, a new style emerged, of which Hobbes' theory was paradigmatic. This flight from the particular, concrete, transitory and practical aspects of human experience became a feature of cultural life in general. From this perspective, the essence of humanity was seen as the capacity for rational thought and action while the emotions were seen as frustrating or distorting reason. This distrust of emotions is still current and reinforces the Cartesian, or calculative, idea of 'rationality'.

Interestingly, Descartes himself acknowledged our fallibility and thus a need for some other agency to certify the truth of human reasoning. There has to be some fixed foundation for our knowledge or we cannot escape intellectual and moral chaos—and this fear continues to worry some philosophers. Descartes found his escape in his belief in a beneficent, infinite and infallible God, who was no deceiver and who underpinned our reason and the procedural certainty of mathematical reasoning.⁵⁷ In this, he was following Plato and Aristotle. It is therefore ironic that his vision—combined with the empirical vision of Francis Bacon—became the basis of the West's new faith: a faith in science, scientific rationalism and human progress—the last being a secularisation of the Christian hope in the coming of the Kingdom of God.

Rorty provides a complementary account pointing to 300 years of Enlightenment rhetoric about the importance of distinguishing sharply between science and religion, science and politics, science and art and science and philosophy. According to Rorty, the paradigm of human activity has been that of 'knowing'—possessing justified true belief, or beliefs so intrinsically persuasive as to make justification unnecessary.⁵⁸ It follows from the Greek belief that what differentiates humans from other animals is our ability to *know* universal truths, numbers, essences and the eternal—in short, to acquire *epistēmē*.

Similarly, Rorty explains that Western philosophy has attempted to underwrite or debunk knowledge claims on the basis of its special understanding of the nature of knowledge and of the mind.⁵⁹ Consequently, the central concern of Western philosophy has been to construct a general theory of representation in which the mind is seen to represent faithfully an independent external reality. The Enlightenment contributed the very idea of an autonomous philosophical discipline, separate from and sitting in judgement on religion and science. Rorty, however, rejects this attempt to set philosophy as the foundational discipline of culture and the judge and jury of other disciplines. He claims that the attempt since the Greeks to explain 'rationality' and 'objectivity' in terms of the conditions of representation is a self-deceptive effort to eternalise the normal discourse of the day. He further denied the existence of an 'Archimedean point' in human understanding that would provide a foundation to all knowledge, and which would provide the source of certainty that the Enlightenment desired.

In particular, he denies the concept of knowledge as mental representation or that we can find within the 'mirror of the mind' a special privileged class of representations so compelling that their accuracy cannot be doubted. This metaphor of the human being whose mind is an unclouded mirror, and who knows, is the image of God. It follows that the human aspiration for objective truth is an attempt to become god-like in the absence of a belief in God. For Rorty, the whole project of establishing a theory of knowledge for the purpose of passing judgement on particular knowledge claims is misconceived. He simply denies that philosophy can adjudicate such claims.⁶⁰

In the same spirit, American philosopher of science Alexander Rosenberg tells us that a purely epistemological exploration of alternative theories of knowledge will not come to any philosophical consensus—nor will it advance science. Rosenberg argues that far from having priority, such philosophy depends on science rather than the other way around. Importantly, he argues that philosophy is nothing more or less than extremely general and abstract theory, on a cognitive par with the natural and social sciences with no demarcation principle between them.⁶¹ Any distinction between the two relies on the discredited positivist distinction between analytical statements—true in virtue of the meanings of their terms—and synthetic statements that have empirical content. As we will see in greater detail in Chapter 7, this distinction cannot be sustained and, as a consequence, we cannot draw lines between philosophy and science.

As we saw with Descartes, underlying these Enlightenment aspirations is an assumption that geometry, mathematics and logic provide *the* paradigm of rationality and that that 'provides a comprehensive standard of incorrigible certainty against which all other claims to knowledge must be judged'.⁶² It assumes that there are definite rule-governed, algorithmic procedures—timeless universal principles—for arriving at that solution from information that is taken as given.⁶³ These rules were seen as freeing us from arbitrariness, as providing the certainty and the reliability sought by the Enlightenment. This algorithmic view, however, reduces human rationality and judgement to a crude mechanical system. As such, it reflects the Enlightenment's mechanical cosmology and its attempt to locate explanation in that mythological archetype, that master narrative. This mechanistic objectivism seeks to relieve us of responsibility for our beliefs.⁶⁴ In this tradition—influenced by Hume—inductive arguments were thought suspect because they could not provide such certainty. Consequently, solutions based on experience do not have the 'necessity' that is thought to characterise reasoned results.

It is these beliefs that are used to justify the distinction made frequently between the context of discovery and the context of justification. In this view, the way in which some truth is discovered is to be distinguished from the justification of that truth and it is the latter that is important, not the process by which we

come to believe. These beliefs also provide the basis of the contrasts made between reason and faith and reason and authority. This view, however, opens up two questions central to this faith in reason: firstly, on what basis are we to select the rules of argumentation and of reason? And secondly, on what basis are we to select the assumptions from which to begin? These questions indicate a need for foundational rules and foundational propositions. In respect of the latter, we can ask the further question, how am I to know that I have a correct understanding of any of the concepts involved in my assumptions—including the concepts involved in my foundational rules—or that there is such a correct understanding? Indeed, it is unlikely that such a ‘correct’ understanding is possible, because such correctness assumes that concepts are fully determined, ideal and timeless entities—Plato’s forms again. As we have already seen, however, concepts are only the tools we create to classify things and events as we interact with the world. Consequently, it is extremely unlikely that they involve complete sets of necessary and sufficient conditions. It is extremely unlikely that our language can reflect adequately such exacting standards or that the resulting concepts can be applied consistently.

In this regard, American academic psychologist Kenneth Gergen—following Wittgenstein and Quine—tells us that the meaning of words and sentences derives from the context in which they are used and that these contexts are so many and varied that there is no means of securing word-object identities.⁶⁵ Additionally, the ways in which we categorise the natural and social worlds are to some extent tradition bound, because the acquisition of concepts is tied to the learning and use of language and reflects the ways of life and understandings current in society.⁶⁶ Furthermore, German social philosopher and critical theorist Theodor Adorno (1903–69) warns us against the domination exercised by concepts, their rigidity and their poverty—their inability to ever capture the richness of reality.⁶⁷ Consequently, our concepts are always an imperfect work in progress. We also have to ask from what source are these variable concepts to derive their intellectual authority other than from tradition itself—something the Enlightenment has rejected?

These questions are not finally resolvable because they threaten either an infinite regress of justifications, vicious cycles or recourse to dogma.⁶⁸ The conventional solution to them invokes so-called ‘self-evident’ or ‘self-justifying’ propositions, intuitions, inductions or perceptions. Such propositions or observational reports cannot, however, provide an indisputable, self-evident foundation for knowledge because they already presuppose a learned vocabulary and grammar. As we have already seen, these are themselves social constructs belonging to a particular linguistic group. To repeat the point made in Chapter 2, there is no world that we can ‘know’, experience or argue about independently of our language.

Importantly, Chomsky's solution to this problem—the claim that we are all born knowing a universal grammar—simply does not stack up against the evidence. It is inconsistent with what we know of the under-organised, flexible nature of the brains of the new-born, as well as the role of spoken language in shaping children's capacity to think—to which we drew attention in Chapter 3. Rather than being born with an innate grammar specified by a genetic blueprint, we have a capacity to induce the conventions of language use from exposure to that language.⁶⁹ This capacity derives from the manner in which the neural networks in our brains function, develop and structure experience. I would go further, believing that this innate capacity to induce patterns from exposure to relatively small numbers of examples is an important part of human intelligence, even if it fails to provide the formal certainty sought by rationalists. Even if Chomsky's claim of an innate grammar were true, it would still not tell us that arguments from true premises that used that grammar were true in the sense in which the rationalists used the word true. We are forced, therefore, to agree with eminent Catholic theologian Hans Kung when he concluded:

People often do not realise that in all their thinking and doing they for all practical purpose constantly presuppose the rationality of reason and so rely upon the ambivalent reality of the world and humanity. That means, in all our doubting and thinking, in our intuitions and deductions there is a priori, a prior act of trust, that is in charge.⁷⁰

These problems are compounded by the insight that metaphors are pervasive in everyday language, thought and action.⁷¹ They are not purely a linguistic construction but are essential to the development of thought. This is because the ordinary unconscious conceptual systems embodied in our language, culture and religion—by which we live on a day-to-day basis—are fundamentally metaphorical in nature. Let me say that again for emphasis: the way in which we think and structure experience involves an imaginative understanding of thing in terms of others—metaphors that tend to form coherent systems. Only purely physical reality is describable in non-metaphorical language, while many of our important concepts are either abstract or not clearly delineated in experience. The greater the abstraction, the more layers of metaphor required. For example, the concept of 'argument' and the language used about it is partially structured, understood, performed and talked about in terms of the concept of 'war'. This metaphorical structuring includes our language about language and our language about reasoning. In particular, we typically conceptualise the non-physical in terms of the physical. It follows, as Lakoff and Johnson confirm, that it is simply not true that 'what is real is wholly external to, and independent of, how human beings conceptualise the world'.⁷²

Importantly, the systematic character of such metaphors necessarily conceals other aspects of the concept or experience because there can never be an exact

fit between the metaphor and the reality it seeks to describe. In particular, they can prevent us from focusing on aspects inconsistent with the metaphor. Furthermore, this metaphorical structuring is partial. It can be extended in some ways but not in others. Consequently, this structuring can provide only a partial understanding of experience. These metaphors can vary from culture to culture and need not fit together—being based on different kinds of experience. For example, not all cultures give the priority that we do to an up–down orientation; some cultures give a much more important role to balance or centrality.

Our experience of physical objects and substances provides an additional basis for understanding that goes beyond orientation. Understanding our experience in terms of objects and substances allows us to pick out parts and to treat them as discrete entities or substances of a uniform kind. This enables us to refer to them, categorise them and quantify them, and consequently to tell stories and to reason about them. In particular, our experience with physical objects provides a basis for a very wide variety of ontological metaphors. Such ontological metaphors are so natural and pervasive in our language and thoughts that they are usually taken as self-evident direct descriptions. Ontological metaphors in which a physical object is specified as being a person allow us to understand a wide variety of experiences in terms of human motivations, characteristics and activities. Because concepts are structured metaphorically in a systematic way, it is possible to use expressions from one domain to talk about corresponding concepts in the metaphorically defined domain. For example, the idea of knowledge having a ‘foundation’ (used above) has been taken from the metaphor of theories as buildings. Lakoff and Johnson argue that the idea that basic concepts are primitives that cannot be decomposed is mistaken. Rather, we experience some things as a complex of properties occurring together, as an experiential gestalt—that is, the experience of them occurring together is more basic than their separate occurrence. The consequence is that these complexes of experiences cannot reasonably be reduced to a more basic set of properties. We therefore classify particular experiences in terms of the experiential gestalts in our conceptual system. Metaphorical entailments also play an essential role, linking the metaphorical structuring of a concept. Additionally, there are often many overlapping metaphors that partially structure a concept. Consequently, our understanding takes place in terms of entire domains of experience and not in terms of isolated concepts.

This has an important implication for the understanding of definitions. The standard, objective view assumes that experiences and objects have inherent properties and that we understand and define them in terms of these properties. An objective view involves saying what those inherent properties are, by giving necessary and sufficient conditions for the application of a concept. It follows from Lakoff and Johnson’s account that we understand concepts only in part in terms of such inherent properties. For the most part, we understand concepts

primarily in terms of concepts from other natural kinds of experience, in terms of what Lakoff and Johnson call their interactional properties, having to do with such things as perception, motor activity, purpose and function. Our concepts of objects—like our concepts of events and activities—are characterisable as multi-dimensional structured gestalts, whose dimensions emerge from our experience of the world. It appears that we categorise things in terms of prototypes and that members are admitted to a category because they have a sufficient family resemblance to the prototype. Consequently, Lakoff and Johnson argue along with Wittgenstein that there need be no fixed core of properties of prototypes that are shared by members of the category. Interactive properties are important in determining what counts as a sufficient family resemblance. Categories can be extended in various ways for various purposes and are open ended. Further, we conceptualise sentences metaphorically in spatial terms. These spatial metaphors automatically structure relationships between form and content. The regularities of linguistic form cannot be explained in formal terms alone. The consequence is that syntax is not independent of meaning. Rather, the logic of a language is based on the coherence between the spatialised form of the language and the metaphorical aspects of the conceptual system. It also follows that many of the similarities that we see are a result of the conventional metaphors that are part of our conceptual system, rather than being inherent in the entities themselves.

The fact that our normal conceptual system is structured metaphorically has an important consequence for us. There is no such thing as a direct physical experience—something emphasised in Chapter 2. Every experience takes place within a vast background of cultural presuppositions. Cultural assumptions, values and attitudes are not a conceptual overlay that we can choose to place or not place on an experience; rather, all experience is cultural through and through. Consequently, there is no such thing as objective truth. Rather, truth is always relative to a conceptual system that is defined in part by metaphor. Importantly, such truth is always partial. We have no access to the whole truth or to any definitive account of reality. Importantly, metaphors play a central role in the construction of social and political realities. Additionally, we have the capacity to create new metaphors, giving us the capacity to give new understandings of experience, to create a new reality and to create a new truth. All of this has a profound implication for our understanding, in particular, of the social disciplines. In these disciplines, we cannot talk truthfully about objective reality, but only about our particular understanding of it, which is itself a social artefact. As we saw in Chapter 2, the people in power are often in a position to impose their metaphors on the rest of us and consequently their understandings of the social and natural worlds. Because most people in our society have been sold the idea of objective truth, those who do so define what is then believed to be absolutely true. The upshot of all of this is that there is no ground for supposing

that that there exists a body of self-evident propositions that would allow us to justify substantive beliefs.

Nor can we simply assume that we have discovered the appropriate rules of argumentation. In this regard, American philosopher Harold Brown tells us that 'there are trade-offs between accepting certain rules of inference and achieving other cognitive goals, and once this is recognised, we can no longer accept the claim that familiar inferences require no justification'.⁷³ It is such problems as these that led Popper, a contemporary champion of rationalism, to depart from traditional epistemology and to accept that it is not possible to establish a priori foundations for knowledge and to accept that there can be no certain knowledge.

It is quite clear from the above that the entire structure of rational analysis rests on a non-rational basis. At the heart of the rationalist claim to provide a foundation for knowledge are acts of faith in the rationality of reason itself and its rules—the 'reasonableness' of the assumptions underlying any particular argument and of the language in which it is expressed. More than this, for Hungarian–British polymath Michael Polanyi (1891–1976), the decisive issue for the theory of knowledge is that 'into every act of knowing there enters a tacit and passionate contribution of the person knowing what is being known, and that this coefficient is no mere imperfection, but a necessary component of all knowledge'.⁷⁴ He also confirms that our believing is conditioned at its source by our belonging to a society and its cultural machinery and is therefore influenced by the forces holding on to social privilege.

In any event, these particular forms of reasoning have themselves come under sustained attack. With the realisation that alternative, useful geometries were possible, mathematicians and geometers recognised that geometries were formal logical systems, based on arbitrary assumptions with no necessary connection to reality. In particular, the existence of alternative geometries undermined the view that Euclidean geometry was a body of a priori necessary propositions.⁷⁵ There is no a priori method by which we can decide which geometry to apply. It is also possible to conceive of different logics and different arithmetic. There are even doubts about the consistency of conventional arithmetic. To make matters worse for the logicians, Gödel demonstrated that it was theoretically impossible to produce any final solution to the problem of the foundations of mathematical logic. As English–Australian theoretical physicist Paul Davies reports:

[T]he grand and elaborate edifice of mathematics was built on sand. Mathematical systems rich enough to contain arithmetic are shot through with logical contradictions...[H]owever elaborate mathematics becomes, there will always exist *some* statements...that can *never* be proved true or false. They are fundamentally undecidable. Hence mathematics will always be incomplete and in a sense uncertain.⁷⁶

Similarly, leading American mathematician Morris Kline confirms this loss of certainty: '[T]he present state of mathematics is anomalous and deplorable. The light of truth no longer illuminates the road to follow...The loss of truth [is]...a tragedy of the first magnitude [in which] the concept of a universally accepted, infallible body of reasoning...is a grand illusion...The age of Reason is gone.'⁷⁷

Furthermore, it was not possible for such an axiomatic system to be self-contained.⁷⁸ Consequently, Penrose tells us that mathematical understanding is not something that can be formulated in terms of rules. Consistent with the claims made here, Penrose goes on to say that there is something in our understanding that is not computational.⁷⁹

One consequence of the indeterminacy of mathematics is that all physical theories are also uncertain because they are cast in the language of mathematics. The same applies to all social theories cast in the same language. Not only does this mean that there are limits to rational inquiry, it precludes us from ever developing a complete theory of everything in the grand manner sought by some physicists—an impossibility acknowledged recently by leading contemporary theoretical physicist Stephen Hawking.⁸⁰ Mathematics is simply a tool created by the human mind and it has no necessary connection to any metaphysical or theological absolutes.⁸¹ Consequently, for American logician Clarence Lewis (1883–1964),

There are no 'laws of logic' which can be attributed to the universe or to human reason in the traditional fashion...Rather all logical systems and 'laws' were human conventions honoured only for their utility...Logical truth could not possibly serve as an ultimate criterion since the nature and form of that truth necessarily depended upon the prior choice of a particular logical system.⁸²

This critique undercuts all pretensions to a priori and absolute knowledge.⁸³ For Edward Purcell, summarising American pragmatists John Dewey (1859–1952), William James (1842–1910) and Charles Sanders Peirce (1839–1914), truth 'was not to be found in the abstract logic of ideas, but in their practical consequences. There were no absolute or a priori truths, only workable and unworkable hypotheses.'⁸⁴

Indeed, Toulmin believes that an exclusive preoccupation with what he calls logical systematicity in science and philosophy has been destructive of historical understanding and rational criticism.⁸⁵ He believes further that people demonstrate their rationality not by ordering their concepts and beliefs into tidy formal structures but by a willingness to respond to novel situations, acknowledging the shortcomings of their former procedures and moving beyond them. Consequently, he attacks the logicians' claim to exceptional insight into the nature of argument and their erection of a special class of argument—the

class of unequivocal, analytical, formally valid argument with a universal statement as a major premise—as the paradigmatic case of sound argument and rationality. He sees this idealisation as an extreme view, a vast over-simplification that is unrepresentative and misleading:

The over-simplified categories of formal logic have an attraction, not only on account of their simplicity, but also because they fit in nicely with some other influential prejudices. From the time of Aristotle logicians have found the mathematical model enticing, and a logic which modelled itself on jurisprudence rather than geometry could not hope to maintain the mathematical elegance of their ideal. Unfortunately, an idealised logic, such as the mathematical model leads us to, cannot keep in serious contact with its practical application. Rational demonstration is not a suitable subject for a timeless, axiomatic science; and if that is what we try to make of logic, we are in danger of ending up with a theory whose connection with argument-criticism is as slight as that between medieval theory of rational fractions and the 'music' from which it took its name.⁸⁶

Acceptance of these idealisations in practice would radically constrain our reasoning abilities, because they make impossible demands on our intelligence. They also stop us from asking when rational inquiry is useful.⁸⁷ Further, they inhibit us from examining the techniques of argument that we use in practice, and which techniques are best for which purpose. It is also clear that it is not possible to reduce all decisions to the application of algorithms. The development of cognitive skills is closely analogous to the development of physical skills—involving skilful performance.⁸⁸ In particular, the human capacity for judgement, for selecting the information most relevant to the situation or question at hand and for balancing competing priorities or perspectives is not a mechanical skill and is not reducible to rule-following. As Brown says, 'The classical model of rationality takes rule-following to be a fundamental cognitive ability and attempts to capture skills in sets of rules, but this has things backwards since the ability to act in accordance with a set of rules is itself a skill.'

The exaggerated claims for deductive reasoning disguise the moral or political choices that are inevitable between possible inferences in long chains of reasoning. Likewise, deductive reasoning—by using contradictory assumptions—can produce radically different ethical systems and geometrical forms of argumentation give us no means of choosing between those assumptions.

For Rorty also, it is a mistake to believe that there are ahistorical standards of rationality by which we can discover who is rational and who is not. This is not to abandon all standards, but simply to recognise our fallibility and finitude. Consequently, justified true belief can be no more than conformity to the norms of the day. Words take their meanings from other words—not their representative character—and vocabularies acquire their privilege from the people who use

them not because they are transparent to the real. As a result, we must give up our desire for a uniform and normalised sense of truth while maintaining a sense of the transience of ideas along with the realisation that the latest vocabulary could just be one of the potentially limitless vocabularies in which the world can be described. Every culture is entitled to judge matters of rationality by its own lights. Similarly, MacIntyre requires us to look behind questions of abstract rationality and ask whose conception of rationality is being used in any situation.⁸⁹

It follows from the above that there can be no all-encompassing discipline that legitimises the others.⁹⁰ Rather, justification is a social phenomenon—a conversation—and not a transaction between a knowing subject and reality. Consequently, words such as ‘rational’, ‘objective’ and ‘cognitive’ are simply marks of distinction applied to matters about which there is agreement. This conversational justification is naturally holistic, in contrast with the reductive and atomistic habits of the epistemological tradition. It is also associated with the dissolution of the philosophical dualisms that have characterised theoretical debate since the Enlightenment. This attempt to devise mutually exclusive categories seems less and less convincing.⁹¹

This conversational view of truth and knowledge does not devalue human knowledge. Rather, it sees us as finite, historical, dialogical beings, always in conversation and always in search of understanding and who must accept responsibility for our decisions. Importantly, it is a view that employs a more realistic concept of truth—that is, that which can be justified to a community of interpreters open to tradition, according to the standards and practices that have been developed in the course of history. It recognises that nothing can count as justification except by reference to what is already accepted—and that there is no way to get outside our language and beliefs to find better tests. These ‘prejudices’ should not be seen as a contamination of what would otherwise be a pure and objective view, because there is no such thing.⁹² This view therefore attacks what the decisive figure in twentieth-century hermeneutics, Hans-Georg Gadamer (1900–2002), called ‘the peculiar falsehood of modern consciousness the idolatry of scientific method and the anonymous authority of the sciences’.⁹³

This metaphor of culture as a conversation, rather than a structure erected on foundations, is central to the hermeneutical tradition. This European philosophical tradition—which is concerned with human understanding and the interpretation of texts—throws further light on the questions raised above and occupies a central role in contemporary philosophical discourse. This tradition arose from biblical and literacy criticism, which sought understanding of a text in the context of its production. It was then extended into the study of history and the nature of historical knowledge. Subsequently, it has developed into the understanding of understanding itself, in which understanding is

conceived of as universal and underlying all activities: 'Understanding must be conceived as a part of the process of the coming into being of meaning, in which the significance of all statements...is formed and made complete.'⁹⁴

Meaning and understanding are essentially and intrinsically linguistic and not psychological processes.⁹⁵ Like Rorty's approach, this approach does not provide another kind of epistemological theory, but discards epistemological and foundational concerns altogether.⁹⁶ Its key insight is that the interpretation of a text involves a dialogue between the author and the text and the text and the reader. Consequently, there is no definitive interpretation of a text. Rather, the meaning of a text changes over time according to how it is read and received. Similarly, the meanings of the concepts with which we try to make sense of the world are subject to continuous negotiation.⁹⁷ Consequently, the determination of specific meanings is a matter for practical judgement and not a priori theory and scientific proof. Indeed, understanding involves a circular, iterative, dialectic process—a hermeneutical circle.

Bergstein describes hermeneutics as a defensive reaction against the universalistic and reductive claims made in the name of science—that it is science alone that is the measure of reality, knowledge and truth. It abandons the belief that all contributions to a discourse are commensurable—that is, can be brought under a set of rules that tell us how to reach 'rational' agreement. This is a reason that is conceived of as being a technical instrument, the means to manipulation and control. Further, it emphasises the historicity of all understanding and interpretation, and criticises the basic dichotomy between the subjective and the objective. In consequence, it attacks the Cartesian belief that it is possible to free human reason completely of bias, prejudice and tradition. Rather, reason gains its power within a living tradition. Consequently, in *Truth and Method*,⁹⁸ Gadamer rejects the dichotomies between reason and tradition, reason and prejudice and reason and authority that have been entrenched since the Enlightenment. This is the essence of reason rooted in human finitude, rather than a deficiency.⁹⁹

For Gadamer, these limits can be transcended through exposure to other discourses and cultural traditions. He places language at the centre of understanding, stressing its role in opening the interpreter to other subjectivities. Importantly, for Gadamer, understanding does not involve reconstructing a speaker's intention, but instead mediates between the interpreter's immediate and emerging horizons. Understanding is bound and embedded in history, employing the interpreter's personal experience and cultural traditions to assimilate new experiences. As John Mallery et al. tell us: 'This purely subjective and continual unfolding interacts with and is conditioned by experience, particularly the experience of language, which tends to mould the developing

subject in conformity with the traditions encoded in linguistic utterances and in the language itself.¹⁰⁰

Nevertheless, an interpreter's imagination can carry the understanding of a text beyond her or his initial understanding. Even so, interpretations are constrained by the questions posed. Similarly for Habermas, truth and meaning do not await discovery, but are negotiated by actors through social discourse.¹⁰¹

Within this approach to knowledge, Rorty suggests a distinction between normal discourse and abnormal discourse, generalising Kuhn's normal and revolutionary science, which we will discuss shortly. Normal discourse is that which is conducted within agreed conventions, while abnormal discourse involves ignorance of—or the setting aside of—these conventions. No discipline can explain such abnormal discourse.

It is important to note that this view—that we can have no certain knowledge—is now conventional wisdom. Its acceptance entails a rejection of intellectual arrogance and dogmatism, particularly the lack of intellectual humility that seems to have infested the entire Western intellectual tradition, particularly since the Enlightenment. As with the Reformation, the lack of a convincing theoretical base—and the radical disagreement it engenders—undermines the magisterium of the theorist. Indeed, we need to take seriously the possibility that the total social environment is too complex, and the human mind too limited, for us to understand¹⁰² —a view with echoes in Hayek,¹⁰³ Niebuhr¹⁰⁴ (1882–1971) and, more recently, Brian Arthur.¹⁰⁵

The next chapter will explore the implications of this critique for the status of science and the social disciplines.

ENDNOTES

- ¹ de Fontenelle 1686, cited in Cox 1984, p. 38.
- ² Oakeshott 1962.
- ³ Tarnas 1991.
- ⁴ Ibid.
- ⁵ Milton 1998.
- ⁶ Habermas 1981, p. 9.
- ⁷ Tarnas 1991.
- ⁸ Lyotard 1984.
- ⁹ Ibid., p. 37.
- ¹⁰ Kellner 1988.
- ¹¹ Madsen et al. 2002.
- ¹² Wicks 2004.
- ¹³ Gutting 2003.
- ¹⁴ Madsen et al. 2002.
- ¹⁵ Rawlings 1999.
- ¹⁶ Madsen et al. 2002.
- ¹⁷ Kellner 1988.
- ¹⁸ Knodt 1995.
- ¹⁹ Tarnas 1991.
- ²⁰ Bernstein 1983.
- ²¹ McIntyre 2005.
- ²² Kincaid 1996.
- ²³ Webb 1995.
- ²⁴ Passmore 1967.
- ²⁵ Popper 1974.
- ²⁶ Adorno et al. 1976, p. 298ff.
- ²⁷ Kincaid 1996.
- ²⁸ Brown 1991.
- ²⁹ Tarnas 1991.
- ³⁰ Reid 1993.
- ³¹ Smolin 1998, p. 29.
- ³² Reid 1993, p. 10.
- ³³ Smolin 1998.
- ³⁴ Penrose 1995.
- ³⁵ See <http://en.wikipedia.org/wiki/Causality> for a contemporary discussion of causality.
- ³⁶ Reid 1993, p. 9.
- ³⁷ Bernstein 1983.
- ³⁸ Ibid., p. xi.
- ³⁹ Tarnas 1991.
- ⁴⁰ Lakoff and Johnson 1980.
- ⁴¹ Hamilton 1994.
- ⁴² Swartz 1995.
- ⁴³ Hamilton 1994.
- ⁴⁴ Rabinow 1983.
- ⁴⁵ Hamilton 1994.
- ⁴⁶ This is too simple a view, which is subject to challenge, but that challenge will not be taken up here. That challenge does not undermine Hamilton's fundamental point. The Eastern view does not lead to a belief that everything is explainable by rational means or, indeed, to a drive for understanding of

The Cult of the Market

causes in that mode, but in a search for harmony with the origin of meaning: the '*Dao*'—the '*Way*'—that mystery that we in the West call God.

- 47 Toulmin 1990.
- 48 Tarnas 1991.
- 49 Toulmin 1990.
- 50 Levack 1987, p. 21.
- 51 Toulmin 1990.
- 52 Tarnas 1991.
- 53 *Ibid.*, p. 280.
- 54 Toulmin 1990.
- 55 Loy 2002.
- 56 *Ibid.*
- 57 Bernstein 1983; Tarnas 1991.
- 58 Rorty 1979.
- 59 *Ibid.*
- 60 Backhouse 1992.
- 61 Rosenberg 1986.
- 62 Toulmin 1972, p. 14.
- 63 Brown 1988.
- 64 Polanyi 1958.
- 65 Gergen 1986, p. 2.
- 66 Toulmin 1972.
- 67 Crotty 1998.
- 68 Albert 1987.
- 69 Lieberman 1998; Churchland 1995.
- 70 Kung 1988, p. 201.
- 71 Lakoff and Johnson 1980.
- 72 *Ibid.*, p. 146.
- 73 Brown 1988, p. 75.
- 74 Polanyi 1958.
- 75 Rosenberg 1986.
- 76 Davies 2004c.
- 77 Kline 1980, cited in Clark 1992, p. 172.
- 78 See Nagel and Newman 1959.
- 79 Penrose 1995.
- 80 Davies 2004a.
- 81 Purcell 1973.
- 82 Lewis 1932, p. 505.
- 83 Purcell 1973.
- 84 *Ibid.*, p. 6.
- 85 Toulmin 1972.
- 86 Toulmin 1958, p. 147.
- 87 Berkson 1987.
- 88 Brown 1988.
- 89 MacIntyre 1988.
- 90 Rorty 1979.
- 91 Horwitz 1992.
- 92 de Lavoie 1990.
- 93 Gadamer 1975b, pp. 310–25.
- 94 *Ibid.*, p. 157.

- ⁹⁵ Bernstein 1983.
⁹⁶ de Lavoie 1990.
⁹⁷ Ibid.
⁹⁸ Gadamer 1975b.
⁹⁹ Bernstein 1983.
¹⁰⁰ Mallery et al. 1986.
¹⁰¹ Ibid.
¹⁰² Purcell 1973.
¹⁰³ Frowen 1997.
¹⁰⁴ Niebuhr 1944, pp. 70–1.
¹⁰⁵ Waldrop 1992.