

e-Journal Philosophie der Psychologie	WITTGENSTEIN AND THE AUTONOMY OF HUMANISTIC UNDERSTANDING P.M.S. Hacker (Oxford)
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Not merely destructive

Wittgenstein was a 'critical philosopher' in two more or less Kantian senses. First, he was concerned, early and late, with elucidating the limits of language. Where Kant had understood by 'Kritik' the delineation of the limits of a faculty, Wittgenstein gave a linguistic turn to a form of critical philosophy. Where Kant explored the limits of pure reason, Wittgenstein investigated the limits of language. Where Kant delimited knowledge in order to make room for faith, Wittgenstein, in the *Tractatus*, delimited language in order to make room for ineffable metaphysics, ethics, and religion. With the collapse of the *Tractatus* conception of the distinction between what can be said and what cannot be said but only shown, his later critical investigations into the bounds of sense led to the repudiation of metaphysics, effable or ineffable. Ethics and religion were conceived naturalistically or anthropologically as aspects of a form of life, ultimately beyond rational foundation or justification. The investigation into the limits of language no longer intimated a domain of ineffable truth beyond those limits, which nevertheless shows itself in the forms of language. There is nothing ineffable about ethics, aesthetics and religion, but a proper understanding of ethical, aesthetic or religious utterances requires an apprehension of their role within the distinctive form of life or culture to which they belong. The bounds of sense fence us in only from the void of nonsense. Philosophy as it were keeps the account books of grammar, and its task is to point out to us when we are drawing a draft on currency that does not exist.

The second sense in which Wittgenstein's philosophy is critical is complementary to the first. Critical philosophy is also concerned with what Kant called the 'critique of dialectical illusion', the systematic criticism of the 'logic of illusion'. Analogously to Kant, Wittgenstein was a remorseless critic of the philosophical illusions that result when the bounds of sense are inadvertently transgressed. He criticized behaviourism and dualism in the philosophy of psychology, savaged Platonism and intuitionism in the philosophy of mathematics, and undermined foundationalism in epistemology and in philosophy of language. He rejected the pretensions of metaphysics to give us insights into the allegedly language-independent essences of things, and repudiated the venerable belief that logic is a field of knowledge of the relations between abstract objects. He condemned as illusion the idea that the subjective and mental is essentially better known than the objective, and denied that the subject has privileged access to his own consciousness. In each such case, his criticisms are not haphazard, but, like Kant's dialectical critique, focus upon failures to accord with the conditions of sense and upon illicit extensions of the uses of expressions beyond their legitimate domains. Because the use of the first-person pronoun does not refer to the body and seems immune to misidentification and reference failure, we are prone to think of it as referring unerringly to a Cartesian ego with which we are intimately acquainted, inhabiting the body but distinct from it. Here we illegitimately extend the rules concerning reference and identification for the use of the other-personal pronouns to the first-person pronoun, failing to see that the use of 'I' standardly involves no identification at all and at best only a degenerate form of reference. We are inclined to think of the mind as a private domain of objects of subjective experience, which each person inalienably possesses, to which he has privileged access and of which he has privileged knowledge. Here we illegitimately extend the distinction between numerical and qualitative identity, which applies to material objects, to experiences — where there is no such distinction —

and erroneously infer that two people cannot have the very same experience. And we mistakenly extrapolate from the use of the epistemic operator 'I know' upon such third-person, present tense, psychological propositions as 'He is in pain (believes such and such, thinks thus and so, expects, wants, etc.)' to the firstperson case, and wrongly conclude that 'I know I am in pain' adds something more than emphasis to 'I am in pain'. We mistake the grammatical exclusion of doubt from a subclass of first-person psychological propositions such as 'I am in pain' for the satisfaction of criteria for certainty, and jump to the conclusion that such propositions are paradigms of certainty. And so forth.

It is easy to get the impression that Wittgenstein is the paradigmatically destructive philosopher, an impression to which he himself sometimes succumbed and indeed sometimes cultivated. In an apocalyptic passage in his diary of 1931 he wrote 'If my name survives, then only as the *terminus ad quem* of the great philosophy of the West. As the name of him who burnt the library of Alexandria' (Wittgenstein 1997: 37). Later that year we still find him saying to himself: 'I destroy, I destroy, I destroy' (CV 21). This is understandable in view of the fact that the years 1929-31 were the period during which he dismantled the *Tractatus* and with it the understanding of metaphysics, ontology and logic¹ that had informed the great tradition of European philosophy. But despite the fact that over the next fifteen years he did a great deal of constructive elucidatory work in philosophy, much the same negative tinge is retained in his final masterpiece, the *Philosophical Investigations*. For he there queries

Where does our investigation get its importance from, since it seems only to destroy everything interesting, that is, all that is great and important? (As it were all the buildings, leaving behind only bits of stone and rubble.) What we are destroying is nothing but houses of cards and we are clearing up the ground of language on which they stand. (PI §118)

It is unsurprising that many of his readers concluded that his aim was wholly destructive, that what Moritz Schlick had hailed as 'the turning point of philosophy' ('die Wende der Philosophie') was in effect 'the terminal point of philosophy' ('das Ende der Philosophie').²

It is not difficult to defend Wittgenstein against this charge. Even if his philosophy were wholly negative and destructive, the critical task of philosophy can have no terminus as long as mankind is prone to fall into conceptual confusion, either in philosophical thought or in science, mathematics, and the humanities. And since there can be no way of circumscribing the conceptual confusions which may distort human thinking or of predicting in advance fresh sources of conceptual entanglement which may emerge from a culture, there will be no end to the need for philosophical criticism.

However, despite his own pronouncements, Wittgenstein's philosophy also has a complementary constructive aspect to it, which he himself acknowledged. Side by side with his demolition of

I am grateful to Professor Rom Harré, Dr John Hyman, Dr Stephen Mulhall, Professor O. Hanfling, Professor Herman Philipse and Professor G.H. von Wright for their comments on an earlier draft of this paper.

¹ The task of dismantling the traditional conception of logic had already been undertaken in the *Tractatus*, in Wittgenstein's criticisms of Frege and Russell, who conceived of logic as a science (of the the most general laws of thought or of the most general facts of the universe). But he then continued to cleave to the idea that logic is 'transcendental'. After 1930, this too was repudiated.

² Schlick wrote an article with the title 'The Turning Point of Philosophy' in *Erkenntnis* I, 1929, in which he hailed Wittgenstein's *Tractatus* as the turning point of philosophy, putting an end to metaphysics and putting philosophy upon the proper path of the clarifier of sense.

philosophical illusion in logic, mathematics and philosophy of psychology, he gives us numerous overviews of the logical grammar of problematic concepts, painstakingly tracing conceptual connections which we are all too prone to overlook. The conceptual geology of the *Tractatus* gave way to the conceptual topography of the *Investigations*. In place of the depth analysis envisaged by the *Tractatus*, he now described the uses of expressions, the various forms of their context dependence, the manner in which they are integrated in behaviour, the point and presuppositions of their use, and their relations of implication, compatibility or incompatibility with other expressions. Such a 'connective analysis'³ of philosophically problematic concepts which give rise to philosophical perplexity aims to give us an overview of the use of our words. 'The concept of a perspicuous representation', he wrote, 'is of fundamental significance for us' (PI §122) — it produces precisely that understanding which consists in seeing connections, and enables us to find our way through the web of language, entanglement in which is characteristic of conceptual confusion and philosophical perplexity. Providing such a perspicuous representation of some segment of our language, elucidating the conceptual forms and structures of some domain of human thought that is philosophically problematic is a positive, constructive achievement which is complementary to the critical and destructive task of shattering philosophical illusion, destroying philosophical mythology, and dispelling conceptual confusion.

However, there is a further aspect to the philosophy of the later Wittgenstein which is in no sense destructive and negative. On the contrary, it betokens a trenchant attempt to protect and conserve a domain of knowledge and form of understanding from erosion and distortion by the scientific spirit of the age. For one may see Wittgenstein's philosophical endeavours as a defence of the autonomy of humanistic understanding against the illegitimate encroachment of the natural sciences. By 'humanistic studies' (*Geisteswissenschaften*) is to be understood the range of intellectual disciplines that study man as a cultural, social and historical being. This includes parts of psychology and linguistics, history, anthropology and the social sciences, as well as those disciplines that study the cultural products of man, such as the study of literature and the arts. I shall use the term 'humanistic understanding' to refer to the distinctive forms of explanation and understanding characteristic of humanistic studies. By 'scientism' I understand the *illicit* extension of the methods and forms of explanation of the natural sciences. Not all extensions of the methods and forms of explanation of the natural sciences to the study of man as a cultural, social and historical being are misconceived. But some are; and so too is the doctrine of the methodological homogeneity of scientific and humanistic understanding.

The doctrine of the Unity of Science, vigorously propounded by the logical positivists earlier this century with roots in nineteenth century positivism and in earlier post-Cartesian mechanism is a form of scientism. In its most extreme form it is reductive. The envisaged reduction may be logical or only ontological. The heyday of logical reduction in philosophy coincided with behaviourism in psychology and linguistics that flourished in the inter-war years of this century. *Logical* behaviourism was a philosophical, not a psychological, doctrine. Where Watsonian eliminative behaviourism in psychology treated the mental as a fiction, logical behaviourism held that statements about the mental are *reducible* to statements about behaviour and dispositions to behave. The former treated the mental as if it were on a par with witches or dragons, the latter treated talk of the mental as if it were comparable to talk of the average man. Ontological

³ This felicitous term is Strawson's (1992). Connective analysis is to be contrasted with depth analysis or reductive analysis.

reduction characterizes much contemporary philosophy of psychology. It is exhibited by the various forms of physicalism currently rife, which deny the translatability of psychological statements into non-psychological statements, but affirm the contingent identity of the psychological with the neural.

A non-reductive form of scientism is methodological. On that view, even though social and psychological phenomena are not logically or ontologically reducible, even in principle, to physical phenomena, the logical structure of explanation in humanistic studies, in particular the explanation of human thought and action, is the same as that of typical explanations in the natural sciences. Accordingly, common or garden psychological explanation of thought and action is causal, and a fully scientific understanding of human behaviour requires knowledge of causes and of the underlying causal laws that determine it. These underlying causal laws may be conceived to be psychological or socio-historical (cf. Hume, Mill or Comte) or physicalist, and hence taken to describe regularities of neural or abstract computational mechanisms. If so, then the whole field of the study of man as a cultural being, hence as a language using social and historical being, is methodologically of a piece with the study of nature. The physicalist version of this methodological thesis is currently common among philosophers.

Wittgenstein was not, by and large, directly concerned with the general question of the status of the study of man in the humanistic disciplines. His main preoccupation throughout his philosophical career was with the nature of representation, in particular linguistic representation — hence with meaning and intentionality. This general concern led him to investigations into psychological concepts and the logical character of explanations of human action. The results of these enquiries have, and have been seen to have, profound implications for the humanities.⁴ In this sense it can be said that Wittgenstein provides guidelines for a kind of philosophical anthropology and hence the foundations for the philosophical understanding of humanistic studies. To this extent, his work constitutes a much needed bulwark against the illegitimate encroachment of science upon those disciplines which are concerned with understanding ourselves, our culture and society.

Since the achievements of western science are among the intellectual glories of mankind, and since science is above all a vindication of the power of reason and observation to render the world we inhabit intelligible to us, it may seem atavistic to accuse science of trespassing upon territory inappropriate for it. How can there be any domain of experience which is not a subject for rational enquiry? And is not the spirit of scientific enquiry precisely that of rational investigation? If so, can it be limited within the sphere of the pursuit of knowledge and understanding? Does not the tradition of western science spring from the very same sources as the tradition of western humanism? And if so, how can there be conflict between them? I shall suggest answers to these questions in this paper. In section 2, I shall give a synoptic view of the emergence of renaissance humanism and the rise of modern science in the seventeenth century, of the manner in which the subsequent development of humanism, in the modern sense of the word, was initially allied with science in combatting irrationality and dogma. In section 3, I shall survey the development of the doctrine of the Unity of Science and the manner in which the methodology of the study of man became swamped by the model of scientific understanding. In section 4, I shall sketch some of the dissenting views in the eighteenth and nineteenth century, which insisted on the autonomy of humanistic understanding, views which were not heeded by mainstream reflection upon

⁴ For example, by Charles Taylor, Peter Winch, and G.H. von Wright. The following discussion is indebted to G.H. von Wright's illuminating essay 'Humanism and the Humanities' (von Wright 1993).

methodology. Thereafter, I shall adumbrate Wittgenstein's philosophy of language and philosophy of mind and action in order to show how his investigations give sound reasons for insistence upon the autonomy of humanistic understanding and repudiation of the doctrine of the unity of science. There are forms of rational enquiry that are not scientific, forms of understanding that are not modelled upon the scientific understanding of natural phenomena. Understanding man as a cultural and social being involves categories and forms of understanding and explanation alien to the natural sciences. There are other domains of enquiry of which that it is also true, for example, aesthetic understanding, understanding of myth and ritual, as well as philosophical understanding. These will not be discussed.

Humanism, science and the study of man

The term 'humanism' is of nineteenth century origin, first in Germany ('Humanismus') and later in Britain. It was used initially to refer to the spirit of the renaissance humanists, who, beginning with Petrarch, revived classical learning and transformed the cultural selfconsciousness of Europe. The *umanisti* revived the study of classical philosophy, literature, history and law. They advocated and practised the teaching of *studia humanitatis*, which was a course of classical studies consisting of grammar, poetry, rhetoric, ancient history and moral philosophy. The name was based on the Ciceronian educational, cultural and political ideal of *humanitas* — the development of the human excellences in all their forms, inspired by classical culture.

Renaissance humanism was not merely a scholarly movement of retrieval of ancient texts. Rather it pursued the rebirth of a cultural ideal of life — which would inform not only a distinctive *vita contemplativa* of literary and philosophical scholarship, but a *vita activa* informed by the ideals the *umanisti* discerned in the literary, and later also the artistic, remains of the classical world. It is no coincidence that the *umanisti* flourished not in the existing universities, but in renaissance courts and academies set up for educational purposes at those courts. Nor is it a coincidence that the ideal of *humanitas*, of the classically educated man of civic virtue, was reborn in a republic (viz. Florence) rather than a monarchy.

The retrieval, translation and editing of classical texts was due to the labours of the *umanisti* and the Byzantine scholars who fled to the West in the fifteenth century. Their work established standards of philological scholarship and a concern for studying original texts without the mediation of commentaries which was in due course to affect Biblical studies, encouraging the study of Hebrew and Greek in order to read the original texts rather than the Vulgate. Long lost philosophical texts became available in the West for the first time since antiquity. The retrieval of the Platonic corpus is due to the labours of the humanists, as is the revival of ancient scepticism and of Stoic ethics. The writings of Roman poets, rhetoricians and historians not only stimulated renaissance poetry and literature, as well as the writing of contemporary history, but provided models for them.

The endeavour was above all directed at a rebirth of, and application of, the wisdom of the ancients. Ancient history was studied not only for its own sake but also for the examples of virtue which it supplied in abundance and for the statecraft that could, it was thought, be learnt from it and applied to the present. The study of Roman law revolutionised jurisprudence from the renaissance onwards. Ancient medical treatises, in particular Galen, were (on the whole unfortunately) influential, and anatomical research recommenced (e.g. Leonardo, Vesallius). Classical texts on mathematics were likewise stimuli to fruitful fresh endeavour, after a hiatus of almost a thousand years in the West. Alberti, who advanced applied mathematics in the art of

projective perspective, in architectural engineering, in cartography and in cryptography, held mathematics to be the key to all sciences; Vittorino made it central to his pedagogical programme at Mantua; and, in the sixteenth century, Cardano advanced algebra.

Renaissance humanism contributed to the emergent individualism of the late fourteenth and fifteenth century Italian city states associated with the rise of the mercantile classes. The revival of the study of the intellectual heritage of the ancient world moulded the conception of humanity that informed the quickening intellectual life of the time. That reality is rational, that the power of human reason can render the world intelligible, that the pursuit of knowledge of the empirical world accords with the dignity of man, celebrated by Gianozzo Manetti and Pico della Mirandola, and is a constituent of the good life — these were important lessons the renaissance learnt from the culture of antiquity. The free intellect of man was glorified and its employment in enquiry into the natural world and into human society was conceived to be a requirement of cultivated man. Man was accorded a dignity, unique in nature, of moulding his destiny according to his choice. The Socratic ideal of selfknowledge and self-understanding was revived as a constituent of the life appropriate to the dignity of a morally autonomous being (see Petrarch, and, much later, Montaigne). It is no coincidence that autobiography was revived in the renaissance (e.g. Alberti, Cardano, Cellini), and that the art of biography flourished as it had not done since antiquity. This humano-centrism marks a profound shift in sensibility relative to the Middle Ages. Nonetheless, it was not perceived to be at odds with, but complementary to, the ideals of Christianity. And it gave rise, in subsequent centuries, to a 'humanism' in a different sense of the term, signifying not only humano-centrism, but also an advocacy of the study of mankind, of the understanding of man and his works, which can be gained from knowledge of human history and the history of human institutions, and from the philosophical investigations (not distinguished from psychological investigations until the end of the nineteenth century) into human nature, the scope and limits of human understanding and the foundations of morality.

Despite the growing interest in the natural world in the fifteenth and sixteenth centuries, and despite great advances in technologically oriented and applied sciences, e.g. architecture, fortification, shipbuilding, navigation and cartography, the development of theoretical science lagged behind. The two theoretical sciences that were at the centre of renaissance interests were astronomy, which was still inextricably interwoven with astrology, and alchemy, which only much later produced chemistry as a legitimate offspring. The conflation and confusion of magic and science were reinforced by Ficino's influential translation of the *Corpus Hermeticum*, mistakenly attributed to the mythological figure of Hermes Trismegistos, and revered by the neo-Platonists. The scientific revolution only gathered pace in the early seventeenth century, after the flowering of the renaissance was over. With Kepler and Galileo, mathematical physics was advanced and physical astronomy was invented, replacing the merely mathematical astronomy which saved but did not explain appearances. *Laws* of nature, expressible in mathematical terms, were discovered, unifying and explaining disparate phenomena in supra- and sub-lunary nature alike. These advances, coupled with new astronomical observations, shattered Aristotelian cosmology. The classical teleological conception of the cosmos was displaced in favour of a mechanistic conception, and final causation discarded from scientific theory in favour of efficient causation. The laws of nature were no longer seen as constitutive of a cosmic *normative* order, of which humanity and human society were a part. Nature was now envisaged on the model of clockwork — intelligible in the language of mathematical and geometrical physics. It was, to be sure, still thought of as exhibiting design — in its laws, but only in the sense that clockwork does (it was left to the

philosophers of the Enlightenment, e.g. Hume, to reject this teleological residue). The order of nature, as studied and understood by the new science, is conceived to be a mechanical order, not a teleological and normative one. Solar centrism demoted man from the centre of the universe. That was in due course, after some appalling persecution (e.g. the immolation of Giordano Bruno and condemnation of Galileo), accommodated without excessive strain. For the insights of the new sciences into the machinery of the universe also glorified the power of human reason to fathom the handiwork of the Great Geometer, and indirectly confirmed man's favoured relation to God. Nonetheless, the shift to mechanistic science contained within itself the seeds of a new and irreligious answer to the question of man's place in nature, seeds which grew to fruition in the nineteenth century.

To be sure, mechanism was hotly disputed by vitalists. Some, e.g. the Cambridge Platonists, denied that mechanism could even explain the phenomena of physics, arguing instead that spirit alone explains *activity* in nature — matter being essentially inert and passive, and invoked the non-conscious spiritual substance of 'Plastick Nature' (Cudworth) or the 'Spirit of Nature' (Henry More). More lastingly, vitalists denied that mechanism could explain life, and rejected the Cartesian reduction of biology to physics. It was not until the twentieth century that vitalism was given its quietus by advances in biochemistry and molecular biology.

The scientific revolution had two great philosophical spokesmen: Bacon and Descartes. Both were concerned with demarcating the proper domain of science and elaborating its methodological foundations. Bacon was the ideological prophet of a scientific technology that would be put to use in the endeavour to ameliorate the human condition. His far-seeing prophecies were not fulfilled until the eighteenth century. For the early strides forward in technology were in the production of scientific instruments, pendulum clocks, telescopes, microscopes, barometers, thermometers — useful primarily in the pursuit of further knowledge (and navigation), rather than in easing man's estate. But from the eighteenth century until the present, Bacon's vision of productive technology has been confirmed beyond his wildest dreams, with destructive and disruptive consequences to both nature and society which he did *not* foresee. Knowledge, his famous slogan declared, is power — power to control and manipulate nature to human ends. The manipulative craving was ancient, and manifest in the magical and cabalistic doctrines of the renaissance, in alchemy and astrology. What was novel, by contrast with the esotericism of renaissance magi, was Bacon's recognition of the need for cooperative scientific research and the sharing of scientific knowledge (duly realized by the establishment of the Royal Society), and his insight into the relation between scientific (mechanical), rather than magical (animist), knowledge of nature and technological advance. For knowledge of laws of nature is also the foundation for knowledge of technical norms guiding the technological manipulation of nature. He was also the ideologist of experimental and inductive method. Descartes likewise envisaged a science that will make us 'the lords and masters of nature' (Descartes, 1911 Part vi: 119), but, by contrast with Bacon, he was the philosophical spokesman for rationalism in science. With hindsight, the conflict between them was only apparent. From our perspective (although not from theirs), each stressed different elements of science which we now recognise to be equally important. Inductivism and experimentalism on the one hand, and rationalist abstraction from the data of experience on the other, are complementary faces of theoretical science as it has developed in the West. Mere observation and correlation of phenomena without the abstraction requisite for mathematicization is blind to the underlying laws of nature, while rationalist, a priori abstraction is empty without observation and experiment aided by instrumentation and measurement.

Just as the renaissance humanists did not see themselves as challenging the truths of Christianity, but as complementing them, so too the heroic figures of seventeenth century science did not conceive of their discoveries or of the picture of the cosmos that they elaborated as challenging religion. On the contrary, they thought of themselves as reading the handiwork of God inscribed in the language of mathematics in the book of nature (see Galileo, 1623). The pursuit of knowledge of nature was a glorification of God, and so the fulfilment of human destiny as conceived by Christianity. Indeed, it has been argued that Judaeo-Christian monotheism, by contrast with Chinese Confucianism which eschewed reflection on transcendent reality and with Indian Hinduism which viewed the empirical world as mere *maya* (illusion), was the ideal seedbed for theoretical science (Quinton 1998). It accepted the reality and importance of the natural world, while affirming the existence of a supernatural order. Behind the flux of experience, it envisaged a single omnipotent intelligence, Creator of the natural world in accordance with an intelligible design. That design is constituted by the laws of nature, which are mathematical. Scientific knowledge can be achieved by penetrating beneath mere appearances to disclose the hidden mathematical patterns of the Creator's design which determine the diversity and the dynamics of the perceptible world. Nevertheless, the renaissance humanists' outlook and the world view of the new science were, in due course, bound to generate conflict with the Christian vision of the day. The renaissance humanists' classicizing interests were overwhelmingly secular, no matter how much they strove to reconcile the classical heritage with Christianity. Their philological scholarship inevitably endorsed challenges to the received interpretations of sacred texts. And their intellectual individualism encouraged the questioning of Catholic doctrine that was duly unleashed by the rise of Protestantism. Similarly, even though the new science did not arise with the intent of challenging religion, it was inevitable that it would clash with prescientific dogmas espoused by the church. It was unfair, but sapient, of Pascal to have observed:

I cannot forgive Descartes. In all his philosophy he would have been quite willing to dispense with God. But he had to make him give a fillip to set the world in motion; beyond this, he has no further need of God. (Pascal 1669 §77)

The tensions were latent from an early stage. They became patent in the eighteenth century age of Enlightenment, when Deism seemed to the first generation of the *philosophes* the attractive alternative to a reactionary Church and Christian doctrines. (The third and last generation of Enlightenment thinkers tended towards atheism, and, unlike their predecessors, inclined towards utilitarianism rather than natural law theory.) A far more fundamental challenge, not merely to Christianity, but to religion in general was presented in the nineteenth century with the advent of the theory of evolution. For Darwin's explanation of the evolution of species by natural selection gave a scientific, naturalist answer to the question of man's place in nature.

From the Enlightenment to the twentieth century, science and the forms of humanism (in the modern sense of the term) that evolved in the wake of the renaissance humanists were allied against authoritarianism in doctrine, despotism in political practice, and irrationality as well as inhumanity in socio-political arrangements. By the twentieth century, the authority of religion on matters of fact had waned. The description and explanation of the natural world was the province of science. Religion still claimed authority from its adherents on matters of value and norm, while scientists were, on the whole, content to conceive of their disciplines as value free and of their

discoveries as value neutral offerings to a society at liberty to use the resultant scientific knowledge and technology as it pleased.

As the twentieth century advanced rifts opened between the spirit and methods of the natural sciences and the humanistic spirit with which they had hitherto been allied. These rifts are manifest today in various forms — in the erosion of humanistic values and the decline of high culture, in the transformation of conceptions of the value of education and its harnessing to the needs of post-industrial society, and in the devaluation of the role of the humanities in education — under pressure from economic forces released by advanced scientific technology. They are exhibited in the growing realisation of the mortal danger of the power of knowledge unrestrained by understanding of humanity. They are also patent at the theoretical and intellectual level of the methodology of understanding human nature and the activities of mankind, in the view that the study of man is of a piece with the study of nature. Here too the fault lines are, with hindsight, visible from the inception of the transformation of western culture by the renaissance and scientific revolution.

Scientism and the doctrine of the Unity of Science

Descartes fostered the vision of the Unity of Science, with metaphysics as the root of all knowledge, physics the trunk, medicine, mechanics and morals the branches. His invention of coordinate geometry encouraged him in his opposition to the Aristotelian conception of the methodological autonomy and irreducibility of different sciences (e.g. arithmetic and geometry). He denied Aristotle's claim that each science has standards of explanation and precision unique to itself, insisting instead upon the methodological unity of the sciences. His assimilation of the biological sciences to mechanics, and his conviction that micro phenomena wholly explain macro phenomena of the physical world, broke with Aristotelian antireductionist tradition. He denied that the soul is the form of the living body and rejected the Aristotelian conception of the vegetative and sensitive souls as necessary to explain vegetable and animal life. The limits of Cartesian mechanism lie at the portals of the mind. But Descartes redefined the mental in terms of consciousness and thought, the latter including subjective perception (seeming to perceive), sensation, pleasure and pain, mental images, emotion as well as intellectual activity and will. This contrasts with the Aristotelian and scholastic conception, which took the mind to be defined not in term of consciousness, but in terms of rationality, hence confined to the intellect and will. But three points are noteworthy. First, Descartes's mechanist successors in the eighteenth century (e.g. La Mettrie, d'Holbach) envisaged no such limitation to the proper domain of mechanist explanation, any more than did his contemporary, Hobbes. Secondly, Descartes had no philosophy of the historical and social sciences. His obliviousness to the latter is understandable in the context of his times, for the social sciences, as opposed to political theorizing and reflections on statecraft, did not yet exist. His contemptuous dismissal of history (Descartes, 1637, Part I:84-85) is more surprising, though intelligible in as much as the study of history is neither reducible to relations between simple natures nor explicable in terms of interaction of micro particles. Hence it lacks the explanatory forms of science and its mathematicization, and cannot hope to achieve the kind of certainty Descartes demanded of genuine scientific knowledge. Thirdly, while he acknowledged freedom of the will, he envisaged the relation between volition and action as causal. By implication, the forms of explanation of human behaviour will be nomological, to the extent that causation is so conceived.

By the eighteenth century, the discovery of laws of nature had sufficiently advanced to make the idea of *laws of the operations of the mind* compelling. 'May we not hope', Hume wrote:

that philosophy, if cultivated with care ... may ... discover, at least in some degree, the secret springs and principles, by which the human mind is actuated in its operations? ... [Newton] seems, from the happiest of reasoning, to have also determined the laws and forces, by which the revolutions of the planets are governed and directed. The like has been performed with regard to other parts of nature. And there is no reason to despair of equal success in our enquiries concerning the mental powers and economy, if prosecuted with equal capacity and caution. (Hume 1748, section I: 14)

Hume's ambition was, indeed, to be a Newton of the mental sciences. In the first flush of youthful enthusiasm, he saw the operations of association of ideas as the psychological analogue of gravitation. Nomological regularity seemed as much a prerequisite of intelligibility in the domain of the psychological as in the domain of the physical. The laws of human nature are universal and trans-historical. 'It is universally acknowledged', he wrote:

that there is a great uniformity among the actions of men, in all nations and ages, and that human nature remains still the same, in its principles and operations. The same motives always produce the same actions: the same events follow from the same causes. ... Mankind are so much the same, in all times and places, that history informs us of nothing new or strange in this particular. Its chief use is only to discover the constant and universal principles of human nature, by showing men in all varieties of circumstances and situations, and furnishing us with materials from which we may form our observations and become acquainted with the regular springs of human actions and behaviour. (Hume 1748, section vii, part I: 83)

The idea that there are laws of mental association seemed to hold out the promise of a genuine science of the human mind. That thought inspired a host of eighteenth and nineteenth century thinkers, such as Hartley, Brown, the Mills and Bain. Indeed, it was this very vision that informed the rise of experimental psychology at the end of the nineteenth century with Wundt's introspectionist psychology. The conception of voluntary human action that had dominated thought from Hobbes and Descartes to the twentieth century was causal — a voluntary act is a bodily movement caused by a mental act of volition. How the mind could interact causally with the body was, to be sure, obscure — an obscurity hardly unveiled by the short lived Cartesian theory of interaction via the pineal gland. By the nineteenth century the received explanation was in terms of kinaesthetic sensations, images of which guide the will in generating voluntary movements. Wundt, Bain, Helmholtz and Mach held that in addition to an image of the kinaesthetic sensation correlated in past experience with the desiderated movement, there must also be a feeling of innervation or impulse, an efferent sensation of volitional energy correlated with electrical currents directed to the appropriate muscles. Nascent neurophysiology was clumsily married to venerable, though misguided, philosophical analyses of voluntary action. The mental came to seem explanatorily redundant — the real explanations of behaviour must lie at the neurophysiological level. Hence if there are any *laws* of behaviour, they must be physiological, and ultimately physical, laws. It is, therefore, not surprising that the developments in neurophysiological psychology in the second half of the nineteenth century gave impetus to forms of epiphenomenalism (e.g. T.H. Huxley). Advances in the neurosciences in the second half of the twentieth century similarly stimulated a

corresponding marginalization of the mental, encouraging the thought that the true explanation of human behaviour is to be found at the neural level or at the level of non-conscious computational operations which have a neural realization.

The explosive growth of empirical psychology in the first decades of the twentieth century included the emergence of both radical (eliminative) and more moderate (methodological) behaviourism among psychologists reacting against the introspective psychology of the previous generation. Eliminative behaviourists, as noted, treated consciousness as a fiction. Methodological behaviourists eschewed subjective reports of mental states, under the misapprehension that such reports rest on introspection, conceived as subjective perception of inner states. Introspection, thus (mis)conceived, was held to fail the test of intersubjective verifiability, and hence to provide unreliable data for an objective science of psychology. Behaviourism dominated experimental psychology in the Anglophone world until the 1950s. It was displaced by the cognitivist revolution, which was intended to reinstate the psyche in psychology and the legitimacy of the empirical study of 'cognitive processes'. Ironically, this transformation coincided with the invention of the computer, the rise of computer sciences, and the emergence of Chomsky's novel, eminently computerizable, theory of syntax, the rules of which the 'mind/brain' was supposed to 'cognize', even if the person did not. Hence the favoured conception of cognitive acts or activities became that of algorithmic information processing, and the study of the mind turned to the construction of models of unobserved but hypothesized cognitive processes in accordance with algorithmic transformations allegedly operated by the brain. Consequently, psychological theory was not so much humanized as computerized — a trend which cohered with neurophysiological developments on the one hand, in particular with the discovery of the functional architecture of the 'visual' striate cortex, and with engineering advances in information theory and artificial intelligence on the other.⁵

The social sciences were late advents upon the scene of Western culture. Just as the rise of the natural sciences in the seventeenth century had an ideologist in Bacon, the rise of the social sciences in the nineteenth century found its ideologist in Auguste Comte. His contribution to the social sciences was as negligible as Bacon's to the natural sciences. But his positivist vision of the character of the study of man as a social being was influential. Every science, he thought, must go through successive theological, metaphysical and positive phases. The several sciences are hierarchically related. The study of society is the last of the sciences to reach the maturity of a positive phase. 'Sociology', or 'social physics' as Quételet had called it, presupposes the antecedent sciences of mathematics, astronomy, physics, chemistry, and biology. Its methodology is in essence no different from the inductive methodology of the other sciences. It studies the laws of the functioning of social wholes ('social statics'), just as biology studies the functioning of organic wholes, and it aims to discover the laws of social development ('social dynamics') as biology aims to discover the laws of biological development. The idea that there are 'iron laws' of social change, which it is the task of the social sciences to discover informed nineteenth century social theories, both Marxist and social Darwinist. Mill, who unlike Marx, was a methodological individualist, likewise held the task of social science to discover general laws of social change. For 'if ... the phenomena of human thought, feeling and action are subject to fixed laws, the phenomena of

⁵ It is striking, but also encouraging, that one of the founders of the cognitive revolution in psychology, Jerome Bruner, is now 'decrying the Cognitive Revolution for abandoning "meaning making" as its central concern, opting for "information processing" and computation instead' (Bruner 1990: 137).

society cannot but conform to fixed laws, the consequence of the preceding' (Mill 1852, Book IV, ch. 6: 548-49). At the end of the century, Durkheim advocated the idea that

social life should be explained, not by the notions of those who participate in it, but by the more profound causes which are unperceived by consciousness ... Only in this way, it seems, can history become a science, and sociology itself exist. (Durkheim 1897)

Internal incoherences were patent. Comte insisted upon invariable laws of social change, but also advocated the formation of a new religion of humanity and a new clergy of a scientific-industrial elite to guide history down the paths which he predicted it must inevitably follow. Marx insisted upon the historical inevitability of the law-governed transformation of society, while simultaneously advocating the need for determined participation in the class struggle. Social Darwinists insisted upon the iron laws of the survival of the fittest, while advocating social policies the adoption of which would ensure the dominance of the bourgeoisie. Freud preached a form of psychological determinism, while presenting psychoanalysis as a mode of liberation from the forces of the unconscious.

The transformation of Western consciousness, which commenced with the renaissance, was deepened by the scientific revolution, and swept triumphantly forward during the Enlightenment, was meant to liberate man from the shackles of dogma, moribund tradition, and unreason, and to lead to the full realization of the capacities of humanity. Knowledge of nature and knowledge of human nature alike were envisaged as being within the powers of man. Achievement of the former would lead to mastery of the natural world, achievement of the latter to mastery of human nature. Mastery of the natural world would be manifest in control and manipulation of nature by technology. Mastery of human nature would be manifest not in control and manipulation of mankind, but in moral improvement through self-knowledge and self-understanding. However, the conception of what understanding of man consists in, of the character of knowledge and understanding in the study of man, of the distinctive nature of the forms of explanation in the humanistic studies, became obscured and then swamped by the forms of understanding and explanation characteristic of the natural sciences. The operations of the mind were first envisaged as subject to law in the same sense as the operations of nature. Psychological determinism, and subsequently neurophysiological determinism, were advocated. Behaviourism sought for laws of human behaviour which would explain and predict human action non-intentionalistically. And the demise of behaviourism led to a computationalist conception of the human mind which was modelled on the pattern of the machines invented by man. Paradoxically, the understanding of man in anthropomorphic terms was held to be illusory, or merely superficial.

Dissenting voices

There were dissenting voices in the eighteenth and nineteenth centuries. Vico had been a lone voice insisting upon the methodological distinctiveness of the study of man and combatting the Cartesian idea that *scientia* is possible only with regard to what is clearly and distinctly conceived, in particular with regard to mathematical descriptions of the mechanical workings of nature. On the contrary, Vico claimed boldly, although we can attain true knowledge in the domain of mathematics, that is because *we have made it*. But we cannot truly understand nature. Were we able to attain that true knowledge of nature which God alone possesses, we should be creating it — *Si physica demonstrare possemus, faceremus*. For *Verum et factum convertuntur* — 'the true and

the made are convertible'. History, art, civil society and its institutions, unlike nature, are made by man and can be understood and known by man in a manner in which true knowledge of nature is inaccessible in principle to him. For the mode of investigation and consequent knowledge of the activities and products of man is altogether unlike the modes of investigation appropriate to the natural sciences. It involves *fantasia*, reconstructive imagination, the endeavour to enter into the minds of other peoples belonging to past times and earlier phases of culture, to see the world through their eyes and in terms of their categories of thought. This is to be done by studying their languages, their mythologies and poetry, their laws and customs, their monuments and rituals. However, Vico's revolutionary 'transvaluation of Cartesian values' went unheeded until he was rediscovered by Michelet in the nineteenth century.

Kant insisted upon a categorial difference between determination of events by causes and the 'determination' of human action by reasons, between the laws of causality and the laws of freedom. The concept of human agency, he argued, concepts of moral action and hence of moral responsibility, of autonomy and hence of doing and being good or evil, are essentially bound up with the form of freedom that is presupposed by behaviour that is 'selfdetermined' by reasons. That in turn implied a radical difference between the understanding and explanation of natural events in causal terms and the understanding and explanation of human behaviour in terms of reasons. But in the attempt to propound a form of compatibilism, to reconcile the inescapable conception of man as part of the order of nature with the equally necessary conception of man as a self-determining autonomous being, he wrapped these distinctions up in an incoherent dichotomy between a noumenal and phenomenal realm. Kant set the agenda for subsequent efforts to clarify what is distinctive about humanity that makes us both part of the natural order and yet also autonomous — a task with which we are still struggling.

Many of the ideas that are to be found, chaotically expressed and interwoven with wild speculation, in Vico's *The New Science*, emerged again, apparently quite independently, in the writings of the post-Kantian German counter-Enlightenment. Like Vico, Herder repudiated the conception of human nature as static, trans-historical, fixed irrespective of time and place. This conception had informed the attempts of renaissance historians such as Machiavelli to derive universal principles of statecraft from the study of the ancients; it was explicitly articulated in Hume's vision of a science of man; and it was shared by the *philosophes* of the Enlightenment. By contrast, Herder argued that human nature is essentially historically and culturally determined. The claim that man is essentially an historical being is to be understood as implying, *inter alia*, that human nature is plastic and changeable, moulded by socio-historical circumstances and national self-consciousness. Forms of thought and action, laws, social organizations and institutions which were appropriate in ancient Athens or Rome are neither possible nor appropriate for modern nations. Moreover, they are not to be understood in terms of the categories of modernity. The mentalities of the Jews of antiquity, of the ancient Greeks or of the Romans are not just phases in the linear unfolding of a trans-historical rationality, stages in the progress of mankind towards the Enlightenment and its ideals. Each nation has its own genius, its own forms of expression, its own conception of reality, which are not more or less primitive approximations to the rationalist world view of the Enlightenment. Hence to understand earlier or alien cultures, indeed, to understand human beings, their thought and works, human institutions, literature or art, requires *Einführung*, 'entering into', the subject in question in its social and cultural context.

The idea that there is a special 'Kunst des Verstehen' was elaborated by German theologians in the early nineteenth century, above all by Schleiermacher, whom Dilthey later characterized as the

founder of systematic, methodologically self-conscious hermeneutics. His concern with the methodology of Biblical interpretation led him to much more general reflections on textual understanding. The nature of understanding, he thought, needs to be fathomed not only in cases of exegetically problematic passages, because contradictory or apparently nonsensical, but quite generally. For, he insisted, 'I understand nothing which I cannot apprehend as necessary and which I cannot construct myself' (the accidental echo of Vico's principle is striking). A text is the product of a particular individual, employing the symbolism of a language of a people, in specific historical circumstances, giving expression to his thoughts as formed within the context of the specific ways in which he views the world. The 'art of understanding' therefore recognizes a duality in all expression of thought, its relation to the totality of the language in which it is expressed and its relation to the totality of the thought of its author. Hence hermeneutics has two aspects, grammatical interpretation and psychological-technical interpretation. The former is concerned with the language of the text, with elucidating its syntax, meaning, style, genre, and their roots in the life and world view of a culture. The latter is concerned with the text as an expression of the individual mind of its author, the product of his individual world view. This requires a form of intuitive insight, an 'act of divination', a sensitivity to the movements of thought of another's mind, indeed a striving to understand an author better than he understood himself.

The self-conscious hermeneutical reflections of the German theologians provided stimulus for philosophers and philosophers of history later in the nineteenth century, such as Windelband, Rickerts, and Dilthey. It was Dilthey above all who made familiar the distinction between the explanation (*Erklärung*) of scientific phenomena and the understanding (*Verstehen*) demanded by historical and social phenomena, and who advocated the principle that 'the methodology of the human studies is ... different from that of the physical sciences'. We experience life as meaningful, see the actions of those around us as imbued with purpose and value, apprehend the past as significant, interpret life in terms of categories richer than the Kantian categories of sensible experience, for example in terms of the inner and outer (mental content and its expression), in terms of human powers to affect things, in terms of means and ends, of value, purpose and meaning. Understanding the phenomena of human life requires empathetic understanding, knowledge of the historical context and of the social and cultural systems in which they are embedded, and interpretation of the forms of thought of the participants. Dilthey's conception of understanding informed the sociological theories and methodology of Weber, who similarly insisted upon the autonomy of sociological understanding.

Nevertheless, such dissenting voices were a minority, and their insights, often confusedly and confusingly expressed, proved difficult to assimilate and to develop. Vico's claim that we have true knowledge only of what we (mankind) create, of history and culture, and not of nature, was preposterous. It masked what was true, namely that the two kinds of knowledge are radically different. His cyclical theory of historical development was patently false, and it obscured his genuine insights into the historically conditioned, variable nature of man. The counter-Enlightenment voices of the German romantics, with their emphasis on the uniqueness and creativity of the *Volksggeist*, *Volkseele*, and *Nationalgeist* (terms originating in the writings of Herder) led less to a sustained development of a philosophy and methodology of humanistic studies than to the philosophical cultivation of irrationalism, nationalism, and ultimately, in the hands of Heidegger and Gentile, of fascism. The terms in which such thinkers and their followers attempted inchoately to articulate the character of the form of knowledge and understanding which they thought distinctive of hermeneutics, 'fantasia', 'inner understanding', 'Einfühlung', 'acts of

divination', 'empathetic understanding' (and, in the twentieth century, 're-enactment' (Collingwood)), were obscure and their attempts to explain them were philosophically unilluminating. Small wonder, then, that they made little impression upon the realist, mathematically trained philosophers and their successors who displaced neo-Hegelian idealism in Britain and neo-Kantianism in Germany from the turn of the century.

The most distinctive philosophical movement of twentieth century thought was analytic philosophy, and in the first half of the century it paid scant heed to the hermeneutic tradition and its concerns. Logical positivism, the leading analytic school of the interwar years, advocated 'the scientific conception of the world'. Its leading members were trained mathematicians and physicists. They explicitly saw themselves and the 'scientific world view' which they advocated as heir to the ideals of the Enlightenment. The methodological goal of positivism was the unity of science. All science, i.e. the total domain of human knowledge, was held to be reducible to physicalist language. 'The physicalist language, *unified language*, is the Alpha and Omega of all science' (Neurath 1931/32: 293). Not only was the language of 'science' conceived to be unified, but the methods of science were held to be uniform. 'All states of affairs, are of the same kind and are known by the same method' (Carnap 1934: 32). The 1929 Manifesto of the Vienna Circle declared that 'The attempt of behaviourist psychology to grasp the psychic through the behaviour of bodies, which is at a level accessible to perception, is, in its principled attitude, close to the scientific world-conception' (Vienna Circle 1929 §3.4). Carnap contended that 'all sentences of psychology describe physical occurrences, namely the physical behaviour of humans and other animals.' Indeed, 'psychology is a branch of physics.' A similar view was taken of the social sciences. 'Sociology', Neurath declared, 'is not a "moral science" or "the study of man's spiritual life" ... standing in fundamental opposition to some other sciences, called "natural sciences"; no, *as social behaviourism, sociology is part of unified science*' (Neurath 1931/32: 296). Brief forays into the philosophy of history (e.g. by Hempel, Nagel and Popper) argued that historical explanation conforms to the hypothetico-deductive model of explanation which the positivists ascribed to the natural sciences.

The contribution of analytic philosophy in its early phases to the philosophy of psychology, the social sciences and the philosophy of history was superficial. The dominant interests of logical positivists and of Cambridge analysts were in the philosophy of physics, the foundations of mathematics, the philosophy of logic and epistemology. Eager to banish metaphysics to the dustheaps of history, and inspired by the ideals of the Enlightenment, they assumed that all rational explanation of any empirical phenomenon must have the same general logical form, exemplified by the forms of explanation in the natural sciences. Their vision of the unity of the sciences seemed to them to be a defence of rationality in the pursuit of knowledge and understanding in all domains, which, they thought, can be opposed only by dogmatism and metaphysics. The conceptual myopia of the Vienna Circle was, however, characteristic of the spirit of the age, and continued to dominate reflection on the methodology of the sciences of man long after the demise of logical positivism. It was encouraged by developments in neuro-physiological psychology and by the development of computer sciences and artificial intelligence, which seemed to suggest that we are to be understood on the model of our machines.

However, there was a further reason for the impotence of the vision of understanding propounded by the hermeneutic tradition. The failure of its advocates to give a coherent and philosophically illuminating explanation of their several conceptions of empathy, *Einfühlung*, re-enactment, 'inner'

understanding, etc. was in part a consequence of their lack of an adequate philosophy of language and philosophy of psychology.

Wittgenstein and the autonomy of meaning

The thought that man, though part of nature, is also unique in nature has preoccupied philosophers since antiquity. The characterization of what sets man apart from the rest of nature has varied. Some have thought it to be man's rationality, his capacity for reasoned thought, or his capacity for knowledge of eternal truths. Others have thought it to be our knowledge of good and evil, our possession of free will and of a moral conscience, or our capacity to act for reasons. Descartes thought that consciousness is unique to mankind. Others have shied at denying consciousness to animals, but have held self-consciousness, understood as knowledge of our own subjective states, to be uniquely human. Nineteenth century historiography emphasized the uniqueness of man as a historical being — other animals have a natural history, but only man has a history and a historically determined nature.

It is striking that all these characterizations, most of which are true, are dependent upon a more fundamental feature, namely that mankind is unique in nature in possessing a developed language. The languages of mankind enable us to describe the world we experience, to identify and re-identify objects in a spatio-temporal framework and to distinguish the objects we experience from our experiences of those objects. Knowledge of truths of reason is knowledge of the norms of representation, and of the propositions of logic correlative to the inference rules, of the conceptual scheme constituted by a language. Only a language user can give articulate expression to his own thoughts, desires and feelings and ascribe thoughts, desires and feelings to others of his kind, can have and give expression to memories of the past, spatio-temporally locating the events experienced. Only such a being can form long term intentions, guided by reasons and norms of behaviour, act on the basis of reflective reason and intentionally follow rules that determine the rightness or wrongness of conduct. What makes us the kinds of creatures we are is, to be sure, *also* our animal nature — but it is our animal nature transformed by our possession of a rich language, which expands our intellect, affections and will. It is not so much eating of the Tree of Knowledge of Good and Evil that expelled us from the Eden of animal innocence, but rather eating of the Tree of Language.⁶

The key to our nature is that we are language using animals. Our language conditions our nature, conditions our understanding of the world and of ourselves, and conditions the institutions we create that constitute the societies in which we live. The humanistic disciplines investigate mankind as cultural, social and historical beings. But we are such beings only in so far as we are also language users. Our animal nature is transformed by our acquisition of, and participation in the cultural institution of, a language. The phenomena that are the subject of humanistic studies are infused with language, intelligible only as properties and relations, actions and passions, practices and products, institutions and histories of language using creatures. The understanding of such phenomena therefore demands forms of understanding and explanation appropriate to and dependent upon the understanding of language and its uses in the stream of human life.

Wittgenstein was not directly concerned with the methodology of humanistic studies. Nevertheless, his philosophy of language and his philosophical psychology show why the subject matter of the humanistic studies is not in general amenable to the forms of explanation of the natural sciences

⁶ A point already sapiently made by Rousseau in his *Discourse on the Origin of Inequality*, First Part.

and why the forms of explanation characteristic of the humanities is different in kind from and irreducible to that of the natural sciences. We shall first schematically survey his reflections on language.

A language, Wittgenstein argued, is essentially a public, rule-governed practice, partly constitutive of the form of life and culture of its speakers. Uses of language, and the words and sentences of language used, are bearers of meaning, objects of understanding that are subject to interpretation and misinterpretation, which are meant or intended by their user, and are embedded in the institutions and customs of their social life. The concept of the meaning of an expression is a holistic one, i.e. an expression has a meaning only in the context of the language to which it belongs. The meaning of an expression is a correlate of understanding, it is what one understands when one understands the expression and knows what it means. The criteria of understanding an expression fall into three broad kinds: correct use, i.e. use in accord with the established rules for the use of the expression, giving correct explanations of the meaning of the expression in context, and responding appropriately to the use of the expression by others.

That a language must be 'public' means that there can be no such thing as a language which cannot in principle be understood by others. Every language is essentially shareable by creatures of a like constitution. Human languages are shared by members of human linguistic communities.⁷ Human beings are not born with an innate ability to speak a language, but with an innate ability to acquire the ability to speak a language. They learn their languages in the communities in which they are born and bred. Learning one's first language is part of the process of acculturation. The child does not learn a list of names and rules of sentenceformation — it learns forms of *behaviour*. 'Words', Wittgenstein emphasized, 'are deeds.' To learn a language is to learn to perform a wide variety of acts and activities that characterize the culture of a linguistic community — to give orders and obey them, to ask for reasons for action and to justify actions by reference to reasons, to describe objects or to construct objects from descriptions, to guess, to report events, to explain events and to explain human actions by reference to agential reasons, to listen to and to tell stories, to crack jokes, to ask, to thank, to curse, to greet, to pray, and so on. Hence a language relates to a way of living, to the form of life and culture of a human community.

Expressions of a language may be used correctly or incorrectly. They are correctly used if they are used in accordance with the received explanations of their meaning. The meaning of an expression is also a correlate of explanation — it is what is explained by an explanation of meaning. An explanation of meaning is a standard for the correct use of the expression — a rule for its use. Hence an explanation of the meaning of an expression is internally related to instances of its correct application. The internal relation between a rule for the use of an expression and its extension is fixed by the *practice* of applying the rule, of correcting misapplications of it, of explaining the meaning of the expression by reference to the rule, by the responses (of understanding, misunderstanding and not understanding) to the expression in use, — which exhibit what counts *in practice* as correct and incorrect applications. Hence information processing, mechanistic models of language acquisition and linguistic understanding cannot be adequate. Mechanisms, both artificial and neural, may produce behaviour that accords with a rule, but cannot

⁷ Save in aberrant cases, such as the last Mohican, or an as yet unshared, invented language. Much ink has been spilt over the question of whether Wittgenstein held language to be essentially shared or essentially shareable. For present purposes, this controversy is of no importance, since human languages are actually shared.

determine what counts as accordance. Nor can brains or computers follow rules, i.e. intentionally act in accordance with a rule.

'Following according to a rule' is fundamental to the institution of language. To learn a language is to master the rule-governed techniques of the uses of its expressions. To understand the meaning of an expression is to be able to use it correctly. One cannot *follow* a rule which one does not know or understand. Hence the rules which determine and are constitutive of the meanings of expressions cannot be unknown, awaiting future discovery. Rather they are exhibited in the humdrum, common or garden explanations of meaning given in teaching, in correcting misuses of expressions, and in explaining what one meant by what one said. What an expression in use means and what the speaker meant by it normally coincide. Giving an acceptable explanation of meaning in context is a criterion of understanding. Someone who uses an expression in an utterance and cannot explain what he meant is judged not to have understood what he said.

Words have the meanings which they are given in the normative practice of their employment in the stream of human life. Their meaning is not determined by mental association or by any causal processes, and it is not answerable to the nature of the world which they may be used to describe. It is not determined by word-world connections, exemplified by linking words with things, names with nominata, but by conventions. It is not nominata and their language-independent nature which determine what names mean, but the rules for the use of names which determine their nominata and their defining nature. The meanings of words are neither 'in the head' nor outside the head, but are constituted by their use in the practice of their application. They are not *determined* by anything 'in the head' or by any object external to the head, but rather by received explanations of meaning which constitute rules for their correct use. Ostensive definition or explanation appears to connect language with entities in reality and to endow expressions with meaning by means of such connections. But that is an illusion. For an ostensive definition links words with samples that belong to the means of representation. It is a rule for the use of a word, akin to a familiar substitution rule, although the substitutable symbol in this case includes the sample ostended and ostensive gesture (e.g. instead of 'black' in the sentence 'the table is black', one may say '*this* + v colour'). There is no *meaning endowing connection* between the means of representation and what is represented. Rather, language is, in *this* sense, an autonomous, free floating structure.

What the expressions of a language mean is not explicable by reference to behavioural stimuli and patterns of response. No attempt to explain the meanings of expressions in behaviouristic terms can explain the rule-governed connections within the network of language, for such connections are *internal* or logical, not causal, and correlation of stimuli and responses can at most establish external relations, not internal ones. A belief is internally related to the fact that makes it true, a desire is internally related to the occurrence of the event that fulfils it, an expectation to the occurrence of the event that satisfies it as an order is internally related to its compliance. There is no such thing as understanding an assertion without knowing what must be the case if it is true, or of understanding an expression of desire or of expectation, or an order *without* knowing what counts, respectively, as its fulfilment, satisfaction or as compliance with it. These are not extractable from a behaviouristic account of linguistic stimuli and responses. That the sign 'V!' is the expression of an order to V cannot be extracted from the fact that an animal is conditioned to act in a certain way on exposure to the stimulus of hearing the sign. For the animal may *misbehave*, it may react *wrongly* to the order. But that its behaviour *is* wrong is determined by reference to the meaning of the order, and does not determine it. The meaning of the order is

determined by the conventions of meaning articulated in the conceptual truth that 'V!' is the order that is complied with by Ving. It is precisely such patterns of internal relations that are constitutive of the meanings of words and sentences. There is no going *below* the level of rules and the normative practices of their application and invocation to determine what expressions of a language mean.

Understanding the expressions of a language is mastery of the rule-governed techniques of their use. The attempt to reduce understanding to stimulus-response correlations cannot account for what is understood, or for the ability that is acquired when the meaning of an expression is mastered. Equally, any attempt to reduce understanding to neurophysiological states is futile. For no neurophysiological story can capture the normative structure that is mastered or what counts as having mastered it. For the criteria of understanding cannot be located at the neurophysiological level, but only at the level of normative (rule-governed) behaviour. Similarly, cognitive scientists' attempt to explain the institution of language by reference to a 'language of thought' which the brain 'knows' and Chomskian theoretical linguists' attempt to explain language acquisition by reference to prelinguistic 'cognizing' of a universal grammar of all humanly possible languages are equally incoherent. For a language of thought would indeed be a private language. Likewise, there could be no such thing as *following* the rules of a universal grammar (as opposed to exhibiting regularities) without understanding them. But neonate language learners cannot understand rules of any kind, and their brains can no more know or 'cognize', understand and follow rules, than their brains can hope or fear, fall in love, feel remorse or guilt, or undertake obligations. For these are properties of living creatures and not of their constituent parts.

Language, thought and action

Animals, *pace* Descartes, are conscious creatures. They can be perceptually conscious *of* features of their environment. For to be perceptually conscious of something is to have one's attention caught and held by it, and the capacity to have one's attention caught by items on the periphery of one's perceptual field is crucial for animal survival. They can learn and therefore come to know many things. They can remember and misremember things they have learnt. They can, in a rudimentary way, think or believe things to be thus and so. But their cognitive powers are strictly limited. A dog may now expect its master, if it hears and recognizes its master's footsteps, but it cannot now expect its master to return home next Sunday. It may now think that it is going to be taken for a walk, if it hears its leash being taken off the peg, but it cannot now think that it is going to be taken for a walk next month. It may remember where it left a bone in as much as it can go and dig it up, but not when it left it wherever it left it. For such capacities presuppose possession of a language.

The limits of thought and knowledge, Wittgenstein argued, are the limits of the possible expression of thought and knowledge. It only makes sense to ascribe to a creature such knowledge, memory, thought or belief as it can in principle express in its behaviour. For it is the behaviour of a creature that constitutes the criteria for such ascriptions. Hence the horizon of possible cognitive achievements of a creature is determined by the limits of its behavioural repertoire. But nothing in the behavioural repertoire of a dog could constitute criteria for ascribing to it knowledge or belief involving determinate temporal reference. But, to repeat, 'words are deeds', and the use of language is behaviour. It is *linguistic* behaviour, involving the use of a tensed language and of devices for temporal reference, that constitutes the primary criteria for ascribing to a creature knowledge, memory, thought and belief involving such reference to the past or future. And it is the

possibility of such linguistic manifestations of knowledge, memory, thought and belief which makes intelligible the ascription of such cognitive achievements even when they are not exhibited.

The possession of a language therefore enlarges the intellect, makes it possible to think not only that things here and now are thus and so, but also that things — of an indefinite variety — are severally thus and so at indefinitely many other times and places. It is the availability of devices of generalisation that makes it intelligible to ascribe to a creature knowledge, belief or conjecture of a universal kind. It is mastery of the use of general concept words, of count nouns, concrete mass nouns, and numerals, that renders accessible to a creature thought which goes beyond mere recognition, and knowledge, as opposed to mere recognition, of number and quantity. And it is the availability, in one's linguistic repertoire, of logical devices signifying negation, conjunction, implication and disjunction, that makes possible reasoning, and hence renders intelligible ascription of reasoning, that goes beyond the most rudimentary. We do ascribe to the higher animals rudimentary forms of thinking. We may even be willing to explain an animal's behaviour by attributing to it a reason for its thinking what it does. But we cannot go far down this road. For even if we are willing to say that the animal had a reason for thinking such and such, a large part of the essential role of reasons for thinking or believing cannot be fulfilled in the case of non-language using creatures. For a mere animal cannot *justify* its thinking by reference to a reason; it cannot *explain* its errors, as we can explain ours, by reference to the reasons it thought it had, for it cannot have *thought it had reasons*; and it cannot *reason* from one thought to another — even if it can perhaps be said to have a reason for an action.

The possession of a language extends the will and affections no less than the intellect. Animals, like us, do not only do things — as inanimate objects do things — they act. Like us they have, and exercise, two way powers, to act or refrain from acting as they please. That is a condition for having wants, as opposed to mere needs. Hence too, unlike plants, animals have wants and act in the pursuit of the objects of their desires. But the horizon of their desires is as limited as the horizon of their cognitive powers. A dog can want to go for a walk now, but it cannot now want to go for a walk tomorrow or next Sunday; it can want a bone now, but not now want a bone for Christmas. Animals have purposes, pursue goals, and choose among different possible ways of achieving their goals. But the trajectory of their will reaches no further than their behavioural repertoire can express, and the objects of their will are constrained by their limited preconceptual recognitional capacities. They can choose between patent alternatives, but not deliberate. There are reasons why an animal acts as it does, but only in the most tenuous sense can we say that they *have* reasons for acting as they do, and it is doubtful whether we can make sense of ascribing to an animal reasons for doing something which it did not do. Only a language using creature can reason and deliberate, weigh the conflicting claims of the facts which it knows in the light of its desires, goals and values, and come to a decision in the light of reasons. In so far as animals can be said to decide, animal decision is not a matter of calling a halt to a process of reasoning, of weighing the pros and cons of a course of action in the light of reasons and coming to a reasoned conclusion, but only a matter of terminating a state of indecision. Similarly, even if we go beyond attributing purposes to mere animals, and ascribe to them intentions — then only in the most rudimentary sense. For without a language there can be no formation of intentions on the basis of reasons duly weighed and considered, no long term plans and projects, no beliefs based upon one's intentions, self-knowledge and assumptions about features of the world which may facilitate or hinder one's plans.

Being language users, we are also essentially intentional animals. Our uses of language are characteristically intentional. We mean something by what we say, and typically mean what we say. We intend to be understood in a certain way, and normally will correct misunderstandings in the light of the meanings of our words and what we meant by them. In saying what we say we perform a variety of speech acts, locutionary, illocutionary and perlocutionary. What we do is intentional in some respects, but may be unintentional in others. What acts we thus perform, intentionally or inadvertently, is determined in part by the words we utter in the context, and by our understanding of them. Hence our behavioural repertoire expands as we master the techniques of using words, and what we do is describable in terms which presuppose the concepts which we possess and exercise. However, it is not merely the speech acts we perform that are intelligible only in the light of the concepts we exercise, but also the vast range of our other intentional acts and activities, which presuppose forms of knowledge and belief available only to one who has mastered a language. The horizon of the intentions of a language user are limited only by the resources of his language, the historically conditioned institutions in which it is embedded, and the possibilities of action he knows or believes to be available in the social context of his life.

Intentional action is action of which it always makes sense to ask for what reason the agent performed it. To specify the agent's reason for his intentional action is to give one kind of explanation of his behaviour. When an agent gives his reason for doing what he did, he not only explains his action, but typically also purports to justify it. The factors which may be cited as reasons may be of different general types. Forward looking reasons may specify a further intent with which the action was performed, as when we V in order thereby to X or to attain G. In so doing, one may further specify the goal of the action in terms of some desirability characterizations which render the act intelligible, desirability characterizations that are intelligible in terms of the scheme of values of the culture of the agent. Backward looking reasons cite past facts or events, and explain or justify the act by reference to them — as when we explain performance of an action as the fulfilment of a promise antecedently made, or as compliance with an order from someone with accepted authority or with a request, or as an expression of loyalty to someone to whom loyalty is owed. Description or redescription of the intended act may give a reason for performing it, if it is, for example, enjoyable, or just, or obligatory. One may also explain and justify one's action by specifying one's social role in the circumstances, given that the social conventions determining the role require or make appropriate such an action. The 'space of reasons', therefore, is also a cultural space.

Wittgenstein rejected the received account of voluntary action as movement caused by acts of volition, and repudiated both innervationist and non-innervationist (Jamesian) ideomotor accounts of action in terms of mnemonic images of kinaesthetic sensations. To characterize a human movement as voluntary is not to specify the nature of its cause, but to *exclude* certain kinds of causes — namely such causes as would rob it of the name of action. For a movement constitutes an action only if the agent could have done otherwise. To explain an action by specifying that its agent wanted to do it for its own sake, or wanted to do it for a further goal, is not to identify a mental cause of the action. For wants would be causes of actions only if the want were always a state or event identifiable independently of the action it allegedly produces. But this condition is patently not satisfiable in myriad cases of voluntary action, e.g. in writing this very sentence, each word was voluntarily written, written because I wanted to write it and none other, but there was no independently identifiable want or volition corresponding to each word.

Contrary to the empiricist tradition, Wittgenstein did not think that either reasons for believing or reasons for acting are causes of believing or of acting. Nor did he think that explanation of intentional action in terms of the agent's reasons for acting is a form of causal explanation. Neither the grammar of 'a reason' nor the epistemology of reasons resembles that of 'a cause' and causes. We attribute reasons, but not causes, to people, as when we say that A *had* a reason for Ving or that A's reason for Ving was that R. Reasons, but not causes, may be good or poor, defensible or indefensible, persuasive or slight. There may be a reason, and A may have a reason, for Ving, yet not V, and his failure to V does not intimate that there was no reason or that he had no reason for Ving. Causes make things happen, reasons guide and justify agents' acting. Accordingly reasons, unlike causes, provide grounds for the evaluation of action as reasonable or foolish, right or wrong. An agent can do something for a reason only if he has the power to refrain from doing it. But if an agent is caused to do something in the sense in which the ice on the path may cause one to slip, he or it does not have the power to refrain from doing it. Knowledge of causes is generally (though not uniformly) inductive, but one's knowledge of the reasons one has or had for Ving is generally not. One does not normally *find out* one's reason for thinking or doing something. In general, an agent's sincere avowal of his reason for Ving is authoritative, even if defeasibly so. But an agent's sincere averral of causes is not. The concept of a reason is related to that of reasoning. Reasoning is a transition from one or more assertion or thought to another, the former purporting to *justify* the latter. A reason is characteristically a premise in reasoning, which may be the reasoning one actually went through or may be given *ex post actu* as the reasoning one could have gone through if challenged.

Explanation of an agent's action by reference to his reasons is not nomic. Specification of the agent's reason does not specify a sufficient condition for the performance of the action for which it is a reason. The agent's specification of his reason is not a hypothesis. Causal explanations, by contrast, are characteristically nomic (or generally so conceived by those who favour the methodological unity thesis), specify sufficient conditions, and are typically hypotheses. Explaining an action as done *for a reason*, or *for the sake of a goal* or *in order* to bring about a certain state of affairs is not giving a causal explanation. The explanatory link between reason and action is not forged by wants and beliefs (mis)conceived as causes, and does not instantiate a causal generalization. It is, in the most fundamental kind of case, what an agent *says* (or *would say*) is his reason that makes the connection between action and what is cited as his reason. Hence it is not normally independent of what the agent sees as the connection, i.e. of how *he understands his action himself*. His expressions of selfunderstanding in giving his reasons for his action may be defeated, as in cases of insincerity, disingenuousness, self-deception, etc. But such circumstances of defeasibility are essentially exceptions to the rule. That is not because the agent normally has an unerring eye for the correct causal hypothesis which will explain his action. What he *says* was his reason *was* his reason, unless there are grounds for doubting the connection he makes between his action and the reasons he had for doing it. Such grounds are not typically afforded by alternative causal hypotheses which the agent has not taken into account, but by his having *other* reasons (often of a less laudable kind) for doing what he did, which fit his motivational history better than the reasons he avows.⁸

⁸ For further elaboration, see G.H. von Wright, 'Of Human Freedom' (von Wright 1998).

Consequences

The above conceptual observations describe but a small part of the web of concepts and conceptual relations which lie at the heart of the characterization of what is distinctively human. But Wittgenstein's connective analyses suffice to shed light upon the flaws in the thesis of the Unity of Science.⁹ Stigmatizing the various forms of reductionism and the doctrine of the methodological uniformity of understanding as 'scientism' is not a form of anti-rationalism. It is not to deny to reason the power to understand both nature and man. Rather it is to insist that the canons of understanding in the study of nature and in the study of man differ, that the forms of explanation appropriate for the one are typically inappropriate for the other. Although Wittgenstein did not concern himself with the nature of explanation and understanding in history and the social sciences, his philosophy of language and of psychology shed light upon the claims made by the hermeneutic tradition originating in Vico. Windelband's contention that history is idiographic, concerned only with the particular and unique, whereas science is nomothetic, concerned with general laws, is indefensible, but contains a grain of truth. Dilthey's distinction between the *Erklärung* (explanation) characteristic of the natural sciences and the *Verstehen* (understanding) characteristic of humanistic studies contains crucial insights, even if poorly expressed. Weber's contention that the objects of sociological investigation have a subjective *meaning* absent from merely natural phenomena indicates an important truth, masked by the obscurity of the notion of meaning invoked. And the hermeneuticians' insistence that understanding phenomena of man as a social, historical and cultural being requires 'divination', *Einfühlung*, *fantasia*, empathetic re-enactment of the thought of the past, similarly combines depth with obscurity and exaggeration. The behaviour of man has to be *understood*, and sometimes *interpreted*, in a sense in which the behaviour of inanimate nature and much of animal behaviour do not. This is obvious in the case of human linguistic behaviour. The utterances of a human being have a *meaning*, which must be understood by reference to the rules of the language in question. Human discourse involves both speaker and hearer. The speaker may mean various things by what he says and what he means may be multi-layered and stand in need of an interpretation. The hearer may understand, misunderstand (misinterpret) or fail to understand what the speaker says or what he means. Hence both describing and explaining human discourse and its upshot, from case to case, requires minimally grasping how it was meant by the speaker and how it was understood or misunderstood by the hearer, and hence too how it is interwoven in the context, in the participants' understanding of that context, and in their motivational history. But the insistence upon the distinctive and irreducible forms of understanding and explanation in the humanistic studies reaches much farther than the understanding and interpretation of discourse. Dilthey held that human life can be understood only by reference to categories alien to the natural sciences, namely categories of meaning. Weber characterized the subject matter of sociology as 'social action', including in the category of 'action' those acts and activities to which the agent attaches 'subjective meaning'. It is doubtful whether the various human phenomena in question are usefully subsumed under the category of the meaningful, where that incorporates not only the notion of linguistic meaning, but

⁹ It should be noted that the thesis of the unity of science is doubly flawed. As argued above, it has no application to the study of man as a social, cultural and historical being. But it is also mistaken within the proper domain of the natural sciences. This theme will not be investigated here. For an illuminating discussion of the methodological disunity of the natural sciences themselves and the irreducibility of manifold scientific explanations to physics and its laws, see J. Dupré (1993).

also that of the intentional (i.e. what is meant), the purposive, that which is emotionally coloured, and what is, in one way or another, valued. Nevertheless, both were sensitive to important differences between the subject matter of the natural sciences and that of humanistic studies.

Since characteristic human behaviour, unlike the behaviour of inanimate nature, is not mere movement but action, its description requires reference to the manifold rulegoverned practices and institutions within which human life is conducted. A man raises his hand and moves it back and forth — the movement can be described and explained physiologically and neurophysiologically. But such hand movements may be an act of greeting, or warning, or beckoning. It may be signalling that a run has been scored, it may be part of the activity of conducting an orchestra, or part of an explanation of what 'waving' means — and doubtless many other things too. Making a mark on a piece of paper can be described physically and neurophysiology, but whether making a mark on a piece of paper is writing one's name or something else, and whether the writing of one's name is signing a letter, a cheque, a contract or a will, inserting a name in a book one owns or dedicating to a friend a book one has written, all these and much else too requires reference to endless rules, conventions and institutions of social life, which are not reducible to anything sub-normative, and are products of social life at particular historical times.

The characterization of distinctively human behaviour and of the intentions that make it what it is can be said to be *context bound*, both 'locally' and 'globally' in a manner alien to scientific explanation. No matter what movements a person executes, they can only be constitutive of signalling a run in a game of cricket, conducting an orchestra, signing a cheque, contract or will if the appropriate cultural, social and legal institutions exist. An intention, Wittgenstein stressed, is embedded in human customs and institutions. Only if the techniques of chess exist can one intend to play the game and make a move as opposed to a mere movement; only if the institutions of contracts, wills, copyrights exist can one intend to make a contract or will, to sell or to violate copyrights. A medieval knight could not have intended to solve a differential equation, and a twentieth century soldier could not intend to be knight-errant. The horizon of possible intentions is set by the historical context in which human beings find themselves. Were the situation to differ in such and such ways, nothing would *count* as having that intention, *no matter what went on in the mind or brain of the agent*. More locally, as it were, the description of a human being as hoping, expecting, or fearing that things are thus and so requires an appropriate surrounding and antecedent history — as describing a human being as feeling pain or seeing something red do not. For these intentional descriptions, applicable on the grounds of behavioural criteria, demand an appropriate context for the criteria to constitute adequate grounds of ascription. An agent's utterance constitutes an intelligible expression of fear, hope, expectation, intention, etc., and hence a criterion for third-person ascription, only in the right setting and with the right kind of history. In the right context, such and such behaviour is a criterion for the agent's expecting a friend for tea, hoping to be able to repay a debt, fearing that there will be an explosion, and so forth. But if one could, as it were, cut a minute's worth of this behaviour out of its context and antecedent history, then what we would see would not *be* expecting, hoping, fearing thus (no matter what mental or neural events accompany it).

Consequently, the *description* of the phenomena that are the concern of humanistic studies requires concepts which are not needed by the natural sciences for the description of their subject matter. Although zoological sciences require psychological concepts for the description of animal behaviour, the range of concepts thus required is limited, and they are attenuated relative to their primary application to humanity because the relevant intentional contents are restricted to what is

expressible in the animal's limited behavioural repertoire. The concepts needed by the animal behaviourist to describe rats would not go far for purposes of describing human behaviour, history and culture. For the manifold speech-acts of human beings, and the acts and activities involved in human discourse, including the understanding of the speech-acts of others and the responses to them, can only be rightly described by reference to linguistic rules internal to the rule-governed activities of speaking a language. Since linguistic meaning is, in the sense explained, autonomous and irreducible to non-normative behavioural or neurophysiological concepts, the description of such phenomena lies beyond the grasp of the concepts of the natural sciences. Equally, the identification of distinctively human behaviour presupposes conventions, systems of beliefs and values, and social institutions which are intrinsically related to the behaviour, and requires concepts associated with these conventions, value systems and institutions. The meaning or significance of such behaviour can therefore be grasped only historically and contextually.

The phenomena of nature do not, in the requisite sense, have a meaning, are not rule-governed or intentional, are not thus embedded in customs and institutions and in specific situations, and are not actions done for reasons. Once rightly identified, human behaviour often demands an explanation — we may correctly identify the behaviour as signing a cheque, a contract, a will or a death warrant, but still want to know why it was done. And for that we need recourse to explanations in terms of agential reasons and motives, and to social norms of conduct. Often the explanation will not only refer to the agent's knowledge and beliefs regarding the situation in which he finds himself, to his goals and values and consequent reasons, but also to his conception of himself and his role, and his conception of others' beliefs about himself. For often understanding his action requires not only an explanation of the agent's reasons, but also an explanation of why those reasons weighed with him — which can sometimes be given by reference to his self-understanding, or his conception of the expectations of others, or the values which he has imbued in the context of the society of which he is a member. Such explanations are alien to the natural sciences. They are not reducible to causal, sub-normative explanations, and are not formally homogeneous with the nomological forms of explanation characteristic of the sciences.

Ramifications

To ward off misunderstandings, it should be emphasized that there is not a *single* form of explanation appropriate to understanding human behaviour. There are many different, though related, forms. To explain behaviour by reference to motives is not the same as explaining it by reference to reasons, and neither are the same as explaining behaviour in terms of tendency explanations. Although desires and wants feature in motive explanations, not all explanations by reference to wants involve motives, and the category of conative explanation is itself diverse. For explanation of behaviour in terms of felt desire, e.g. hunger, thirst or lust, is not the same as explanation in terms of purposes and goals. And these too are different from explanations in terms of tendencies. Tendency explanations are themselves diverse, since explaining behaviour by reference to custom is not the same as explaining it by reference to habit, and neither are the same as explanations by reference to dispositions of character. Explaining inaction or omission by reference to physical inability is not the same kind of explanation as explaining inaction by reference to normative inability, e.g. lack of legal power, and neither are the same as explaining omission by reference to ignorance, inattention, carelessness, inadvertence, mistake or accident — none of which are the same as explaining it by reference to intentions, and associated reasons or motives. Wittgenstein did not explore the complex relations between actions and omissions and the

kinds of explanation and explanatory factors appropriate to them, nor did he examine the relations of compatibility and incompatibility between different types of explanation and explanatory factors. Others, since his death, have endeavoured to do so.¹⁰

What Wittgenstein's reflections show, if they are correct, is not that history, let alone psychology, sociology and economics, is *idiographic* (as Windelband suggested), concerned only with the particular and unique.¹¹ To be sure, much of history and historical explanation is, and so too are some of the concerns of the social sciences. It is also true that where the explanandum is thus specific, no matter whether it is as particular and individual an event as Elizabeth I's 'etceteration' or as complex, multiple-agent involving an event as the outbreak of the First World War, it is not explained by subsumption under general laws which apply to all events of a general kind, but by reference to the agents' reasons and motives, their understandings and misunderstandings of the situation that confronted them, their specific judgements, made in the light of their evaluations of the situation and of their values in that situation. Nevertheless, it would be wrong to deny to historians any *nomological*, i.e. generalizing, ambitions, and absurd to extend such a limitation to psychology and the social sciences. However, even nomological insights in the domain of the study of man as a social and cultural being are not *nomothetic*, i.e. do not specify strict, exceptionless laws. The valid generalizations that can be achieved through the study of history, economics and society are not akin to laws of nature, and their explanatory value is not akin to that of scientific laws. For what underlies the generalizations of the study of culture and society is not the blind movements of matter in space, but the actions and activities of man — sometimes intentional, often done for reasons, typically moved by motives and directed to ulterior goals, and only intelligible as such. Statistical correlations abound in the social sciences, as they do in the natural sciences, but no understanding of the phenomena described by such correlations in the social sciences, e.g. of divorce rates or illegitimacy rates, is achieved in the absence of further investigations of the beliefs, motivations and values of the agents, which will render their behaviour intelligible. What Wittgenstein's elucidations show is that the relevant

concepts are not reducible to the concepts of the natural sciences, are not eliminable, and that the relevant explanations are not logically homogeneous with explanations in the natural sciences.

Of course, experimental psychology aims to discover general laws of human nature. Its main successes have been, and could only be, at the level of the investigation of human capacities (e.g. the capacities to perceive, recognize, remember, attend, calculate, reason inductively, draw inferences), the neurophysiological structures that underlie them, the dependence of these capacities and their exercise on innate dispositions, environmental circumstances, learning, and the order of their acquisition and development. Here there are generalizations to be discovered, perhaps even general laws. But they do not explain individual human behaviour save in so far as they disclose constraints on what a person can do or think in a given situation. For what is investigated are the conditions under which human capacities *can* be exercised — not why particular people under specific social and historical circumstances do what they do, the ways in which they understand the situation in which they act, and the reasons they have for doing what they do. To understand the latter requires attention to the specific agent and his unique life, to the

¹⁰ For example, G.E.M. Anscombe, A.J.P. Kenny, B. Rundle, F. Stoutland, G.H. von Wright, A.R. White.

¹¹ It would be equally mistaken to suppose that the natural sciences are never concerned with the particular and unique, with identifying the nature, causes and consequences of individual events in nature, e.g. the destruction of dinosaurs as a consequence of the impact of a large meteorite in the gulf of Mexico. But such 'idiographic' explanations in science do subsume the particular under general laws.

way he views the world, to his beliefs and goals, to the reasons that weigh with him and to the values he embraces — which is why the greatest of psychologists are the great biographers and, above all, the great novelists (we understand more about Emma Bovary or Anna Karenina than about anyone we know).

Understanding the thought and action of other people does, to be sure, require sensitivity, imagination. 'What one acquires here', Wittgenstein noted, 'is not a technique; one learns correct judgements. There are also rules, but they do not form a system, and only experienced people can apply them right. Unlike calculating rules' (PI, p. 227). Only metaphorically speaking does it require one to 'enter into the mind of another'. It demands a grasp of the other's reasons for thinking or doing whatever they thought or did, understanding their fears and hopes, their purposes and values — and, in this sense, to see things from their 'point of view'. Many aspects of historical understanding are similar, save that such understanding also needs to be informed by scholarship, and not merely the sensitivity and judgement that is the product of life. It does not require the historian to 'reenact' the thought of the past in his mind, but to understand the thought and action of the past in terms of the beliefs, values, goals, reasons and motives available to the agents whose actions are being studied. For it requires a grasp of the mores and morals of the times, of the intellectual and volitional horizons set by the culture, of the social institutions and structures that obtained. These are not describable or explicable in terms available to the natural sciences. Nor are the terms in which they are describable and explicable reducible to the categories of the sciences.

It involves no denigration of science let alone of reason to insist that there are domains of enquiry which lie beyond the purview of science. Forms of rational understanding and explanation are diverse and logically heterogeneous. Science and humanism were indeed allied in their endeavours to combat unreason, moral and political dogma, and the mythmaking power of religion. Science is a source of truth, and its achievements over the past four centuries are indeed remarkable. Every source of truth is also unavoidably a source of falsehood, from which its own canons of reasoning and confirmation attempt to protect it. But it can also become a source of conceptual confusion, and consequently of forms of intellectual myth-making, against which it is typically powerless. Scientism, the illicit extension of the methods and categories of science beyond their legitimate domain, is one such form, and the conception of the unity of the sciences and the methodological homogeneity of the natural sciences and of humanistic studies one such myth. One task of philosophy is to defend us against such illusions of reason.

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Erstpublikation in: Wittgenstein, Theory and the Art. Edited by Richard Allen and Malcolm Turvey. London: Routledge 2001. S. 39-74. Wiederveröffentlicht mit freundlicher Genehmigung des Verlages.