Introduction

The present work seeks to document the most important traditional and contemporary streams in the two overlapping fields of metaphysics and ontology. Both disciplines were, even just a few years ago, seen by many as of negligible contemporary interest. The editors, neither of whom had shared this general opinion, were none the less surprised to see how much valuable work had been achieved in these areas not only in the past but also in our own century. The intensity of contemporary work in metaphysics and ontology points indeed to a healthy renewal of these disciplines, the like of which has not been seen, perhaps, since the 13th century. In order to summarize what, from the editors' point of view, seem to be the most important trends underlying these contemporary developments, the present Introduction offers a brief and wilfully selective overview of the contents of this *Handbook*.

Aristotle

The founders of Western philosophy in ancient Greece initiated the development of metaphysical systems in a process culminating in the work of Plato, Aristotle, and the Stoics. It was especially Aristotle's metaphysics, called by him "first philosophy", that became paradigmatic for future research in the field, and this in at least seven respects:

- Aristotle analyses a wide range of metaphysical concepts: the categories (substance and nine kinds of accidents), the *praedicabilia* (genus, species, *proprium*, etc.), modal concepts, concepts of essence, existence, identity, privation, and four different kinds of cause.

- Aristotle uses four fundamental metaphysical relations, namely substance–accident, part–whole, cause–effect, and means–end, for the purposes of metaphysical analysis.

- Aristotle subscribes to a liberal methodological attitude, using different kinds of methods, such as definition, induction, and deduction, in his metaphysical works.

- In all his works Aristotle shows a fundamental empirical attitude which enabled him to introduce into science new empirical disciplines such as biology and non-celestial physics, in addition to the Platonic disciplines of metaphysics, geometry, and astronomy. This was possible first of all because Aristotle – in contradistinction to Plato – accepts as scientific not only ἐπιστήμη, i.e. necessary or certain knowledge, but also ἔνδοξα, i.e. probable or conjectural knowledge. But it was possible also because Aristotle embraced the idea that the sublunar reality in which we live manifests certain intrinsically intelligible structures our knowledge of which provides an *a priori* (pre-inductive) basis for science and philosophy.

- An important consequence of Aristotle's empirical approach is that his metaphysics is not a closed system like that of Plato, but is rather open to new insights and intimately connected to all kinds of scientific developments.

– Aristotle's metaphysics is controlled further by his syllogistic, or more generally by logical considerations both formal and philosophical in nature. Thus from the beginning his metaphysics is a rational enterprise, bound up with the search for truth, and has nothing to do with myth or poetry.

– Yet even though Aristotle is the first to have developed a deductive system of logic, his metaphysics is not deductive but rather descriptive, defining its fundamental concepts in cumulative, empirical fashion.

Medieval and Post-Medieval Metaphysics

Aristotle's empirical and liberal methodological attitude was shared by all important medieval and post-medieval Aristotelians such as Avicenna, Averroes, Albert the Great, Thomas Aquinas, John Duns Scotus, William Ockham, Francisco Suárez, G. W. Leibniz, and Franz Brentano. The dominance of Aristotelianism is illustrated by the fact that, until the *Disputationes Metaphysicae* of Suárez in 1597, works on metaphysics standardly took the form of commentaries on writings in the Aristotelian corpus. Taking into account their empirical and rational attitude, it is not surprising that the scholastic Aristotelians – represented above all by the Dominicans, and later by the Jesuits – were the predecessors also of modern science.

A new topic in medieval metaphysics, foreshadowed in Plato's and Aristotle's theology and in that of the patristic philosophers, is the reflection on concepts of God, his perfections, his thinking, and his action. From this stem also reflections on possible worlds, on modal concepts such as the necessity and contingency of divine and human action, on absoluteness and dependence, and on the methodological differences between philosophy and theology.

The 17th Century

The 17th century brings three novelties. First, the name 'ontology' is introduced in 1613 by the German Protestant Scholastic Rudolphus Goclenius and from this time stands for *metaphysica generalis*, as contrasted with the *metaphysica specialis* of, for example, cosmology and natural theology. The second is that René Descartes, in some respects treading in the footsteps of Augustine, develops a metaphysics in which there is added to the description and analysis of the external world a rational treatment of the inner world, which is to say a metaphysics resting on the description of the mind, its acts, and their cognitive and non-cognitive contents. A third novelty consists in the development by Spinoza in his *Ethics* and by Leibniz in his *Monadology* of a new kind of deductive, systematic metaphysics. Spinoza was influenced in this respect by the renaissance of Euclidean geometry in the 16th century, Leibniz by his own pioneering inventions in the field of logical calculi. Descartes, Leibniz, and Spinoza were all in addition profoundly shaped by the scholastic tradition in which they had been trained, and therewith also by the Aristotelian metaphysics of substance and accident.

A central theme of metaphysics in the 17th century, though one which draws on earlier work above all by Scotus, is the problem of individuation, represented, for example, in the philosophies of Suárez and Leibniz. Not only the individuality of

substances is discussed but also, in the tradition of Aristotle and the medieval Scholastics, that of accidents such as actual properties, dispositions, processes, and situations. Leibniz introduces to philosophy the notion of an individual concept, a concept under which all the accidents of an individual fall, and therewith also aspects of the modern logical concept of a possible world.

The 18th Century

Kant criticized traditional metaphysical systems such as those of Leibniz and Christian Wolff which were in his mind dogmatic in character. In order to avoid dogmatic metaphysics, Kant developed instead a view according to which the world of experience is somehow formed or shaped by what he called the "transcendental subject", reality in itself remaining intrinsically unknowable.

German idealists such as J. G. Fichte, G. W. F. Hegel, and F. W. J. Schelling developed idealistic metaphysical systems not controlled or even disturbed by the existence of logic, and their work thus constitutes a deterioration in comparison with what had been achieved by earlier metaphysicians. Hegel replaced formal logic by dialectics, and the absence of logic in his philosophy, coupled with the lack of an analysis of the external world and the neglect of natural science and mathematics, yields as end-result a most peculiar absolutistic evolutionary idealism.

The Brentano School

The standards of rigour and descriptive adequacy of Scholasticism were re-established above all by Franz Brentano and his school. Brentano, a pupil of Adolf Trendelenburg, one of the few Aristotelians in the 19th century in Germany, created a philosophical system which was a synthesis of Aristotelianism, Cartesianism, and the empiricism of the British school. This system was modified in different and often highly original ways by his pupils, the most important of whom were Kazimierz Twardowski, Edmund Husserl, Carl Stumpf, Christian von Ehrenfels, Anton Marty, and Alexius Meinong.

In contradistinction to Hegel and his fellow idealists, the Brentano School was very successful in associating its philosophical work in fruitful ways with modern developments in the sciences, above all in psychology and linguistics. Brentano's pupils were responsible for founding not only new philosophical movements such as phenomenology, but also new programmes of scientific research such as the Gestalt theories of the Graz and Berlin Schools. Brentano's pupils contributed in important ways to modern logic, above all through Twardowski and his students in Poland. And they contributed also to ontology, for example through Meinong and the members of the Graz School, who established the so-called theory of objects. Husserl, following in some respects in Meinong's footsteps, founded in turn the discipline of formal ontology and was the first to analyse in formal manner the ontological concepts of dependence, part and whole. Husserl's work in this field was then continued in philosophy above all by Adolf Reinach and Roman Ingarden, and in its application to linguistic parts and wholes by Stanisław Leśniewski and others in Poland. Husserl's philosophical ideas on formal and material ontology gave

rise further to a new understanding of synthetic or material *a priori* truths. From the perspective of Husserl, Reinach, and Ingarden such truths are not, as for Kant, the products of a forming or shaping activity on the side of the subject. Rather, as for Aristotle, they represent intelligible structures on the side of the objects of experience, structures which are not invented but discovered, and which serve, again, as a pre-empirical basis for science and philosophy.

Early Analytic Metaphysics

The first analytic philosophers of our century, such as G. E. Moore, G. F. Stout, Bertrand Russell, and Ludwig Wittgenstein, did not, like many of their mid-century successors, suffer from an anti-metaphysical attitude. Moore's early ontological analyses focused on concepts and propositions. He understood concepts as non-subjective, eternal, and immutable objects of thought, as things that are real, but not part of nature. Russell distinguished more carefully between particulars and universals, developing in the wake of Gottlob Frege a logistic conception of mathematics which treats mathematical objects as logical constructions which are at the same time denizens of an eternal Platonic realm.

Frege, too, was something of an ontologist, though his peculiarly baroque brand of Platonism, recognizing the True and the False as supreme entities, has found few subsequent adherents. Wittgenstein's *Tractatus*, also at least in part an ontological work, seeks to combine the Fregean ontology of function and argument with an ontology of states of affairs or *Sachverhalte* which draws on the logical atomism outlined by Russell.

Lingering Kantianism, Vienna positivism, the philosophy of linguistic analysis, and above all W. V. O. Quine, thereafter served for a time to render unfashionable the ontological and metaphysical concerns which had for previous generations of philosophers formed the very centre of the discipline of philosophy. Quine's theory of ontological commitment is however far from eliminating the need for further ontological research. On the contrary, a theory of ontological commitment is one of the crucial meta-ontological presuppositions of every ontology. Other presuppositions are a theory of ontological reduction and an account of dependence, of part and whole, and of the other formal and material relations in which the entities admitted by an ontology may be conceived as standing.

Contemporary Metaphysics

Contemporary metaphysics is in many respects similar to Aristotelian metaphysics:
– In modern metaphysics, too, a wide range of concepts is subjected to analysis, concepts such as *event, process, action, situation, state of affairs, particular, nexus, world, set, guise,* and so on. In post-Meinongian ontological systems, moreover, the arsenal of entities treated is also in other respects much larger than it was in former times.
– As concerns the four fundamental ontological relations, it is above all mereological analysis that has seen the most impressive development, starting with

Stanisław Leśniewski and Nelson Goodman and culminating in the work of Peter Simons and others.

– Contemporary metaphysics, too, subscribes to a methodological liberalism, adapting its methods to the matters to be analysed.

– Contemporary metaphysics has a solid empirical foundation, enjoying close connections to natural sciences such as physics and biology, as well as to disciplines such as psychology and linguistics and to borderline areas such as artificial intelligence.

– Modern metaphysics, too, is an open system taking over from the sciences concepts like emergence, field, and space-time, and concepts of social wholes and parts, and subjecting these to new types of philosophical treatment.

– Different kinds of logic are fundamental for the development of metaphysical systems. The modern attitude leads to a logical pluralism, so that we have not only classical Frege-style logic, but also free logics, modal and paraconsistent logics, etc.

– Modern metaphysical systems are to an overwhelming degree deductive in nature and are in this sense closer to the systems of Spinoza and Leibniz than they are to those of the Aristotelian metaphysicians.

Of the two editors of this *Handbook* – who bear equal responsibility for all its parts and moments – one is an admirer of Leibniz and the 17th-century rationalists and thus finds himself strongly allied to certain modern deductive trends. The other feels more at home in the 13th or 14th centuries and is accordingly critical of the over-enthusiastic and often over-simplistic use of formal logical techniques in contemporary metaphysics. The editors are however equally convinced that it is precisely the tension between the deductive and descriptive approaches to the problems of metaphysics and ontology which will be responsible for the future creative advances in these fields. And they are convinced also that such advances can be furthered by an understanding of the history of metaphysics and ontology, an understanding – guided by the most sophisticated modern research and by the use of the most sophisticated modern techniques – of the sort this *Handbook* has been designed to facilitate.