

Chapter One

Austrian Philosophy and the Brentano School

1. *The Rise of Scientific Philosophy*

It was in 1922 that Moritz Schlick – a German physicist-cum-philosopher of aristocratic manners and conservative opinions – arrived in Vienna. Schlick had been invited to take up the chair of philosophy ‘with special reference to the history and theory of the inductive sciences’ that had been created for another physicist-cum-philosopher, Ernst Mach, in 1895. Mach himself had previously served for almost thirty years as professor of experimental physics in Prague, at that time a centre of intellectual activity almost no less important than Vienna herself. The lines of communication between the two cities were still strong, and the same figures were often, at different times, prominent in each.

The two cities shared also the characteristically Austrian predilection for forming clubs, societies, and discussion groups. The cultural and intellectual life of the Habsburg Empire was indeed to a striking extent a matter of ‘schools’ and ‘movements’, and one might pause to reflect on the degree to which such schools and movements have determined the artistic, intellectual, and political world we inhabit today. Thus consider, in no particular order, the Vienna psychoanalytic movement, the Zionist movement founded by Theodor Herzl, the ‘new Viennese school’ of composition around Arnold Schönberg, the school of linguists and psychologists around Karl Bühler, the school of Austrian economics founded by Carl Menger in 1871 and evolving, by degrees, into the Ludwig von Mises circle in the 1920s. Or consider the ‘Prager Kreis’ of novelists and critics around Max Brod and Franz Kafka, the Prague linguistic circle of Roman Jakobson, Jan Mukařovský and Nikolai Trubetzkoy, or, in more recent times, the philosophical discussion group which met regularly in the apartment of Václav Havel and which later formed the nucleus of the Czech Civic Forum.

Schlick, too, had his regular Thursday evening discussion circle. This comprised above all a group of mathematicians around Hans Hahn, himself a former student of Mach and Boltzmann, and included Kurt Gödel, Gustav Bergmann, Karl Menger (son of the economist Carl), and Schlick’s own assistant Friedrich Waismann. The Schlick circle could count among its members also Philipp Frank, Herbert Feigl, Viktor Kraft, Rudolf Carnap, and a

certain sociologist-cum-philosopher, proletarian in manner and socialist in opinions, by the name of Otto Neurath.

Carnap is, apart from Schlick himself, the single native German on this list, and it is remarkable to consider the extent to which not merely logical positivism but also the exact or scientific philosophy of which it formed a part were and are characteristically *Austrian* phenomena. One thinks in this connection not only of Mach, but also of another Prague figure of an earlier generation, Bernard Bolzano. Bolzano was on the one hand a priest and social reformer; but he was also a notable mathematical logician and philosopher of science, though his contributions in these fields were largely ignored until after his death. One thinks of Ludwig Boltzmann, hero of Wittgenstein and contemporary of Mach in Vienna; one thinks of Wittgenstein himself, of Ludwik Fleck, Karl Popper, Michael Polanyi, Paul Feyerabend, Wolfgang Stegmüller and Imre Lakatos – all of them Austrians (or Austro-Hungarians) who have, for better or worse, done much to determine the shape of the philosophy of science as we know it today.¹

Consider, as an example, the case of Ludwik Fleck. Fleck was born in 1896 in Lvov (Lemberg, Lwów or Lwiw), capital of Galicia on the Eastern fringes of the Habsburg Empire. He was the author of some 200 scientific papers in the areas of medicine and microbiology.² But he was also the author of a longer, philosophical work, published in 1935, entitled *Genesis and Development of a Scientific Fact. Introduction to the Doctrine of Cognitive Style and of the Thought-Collective*, a work that is of interest first of all because, as a contribution to the nascent discipline of ‘sociology of science’, it anticipates and perhaps even served to inspire some of the now so influential ideas of Thomas Kuhn. (Kuhn in fact contributed a preface to the English translation of the work.) But it is of interest also because Fleck was one of a number of Lemberg-based philosophers and philosophically-minded scientists and mathematicians who were associated, in different ways, with those developments in scientific philosophy in Central Europe which will here concern us – and it will turn out that Lemberg, like Vienna and Prague, will have a quite special role to play in the story that follows.

The native *German* philosophers who have made serious contributions to exact philosophy or to the philosophy of science in the modern sense are, in contrast, remarkably few, and of these – one thinks particularly of Hans

1. Another native Austrian who deserves mention in this connection is the economist Friedrich von Hayek, a distant cousin of Wittgenstein, who was the author of a Mach-inspired treatise on the foundations of psychology (1952: the initial draft dates from around 1920), as also of a work in the history and philosophy of the social sciences (1952a). One might mention also the Hungarian philosopher and social theorist Karl Mannheim, one of the principal initiators of the so-called ‘sociology of knowledge’.

2. For a complete bibliography of Fleck’s writings see Schnelle 1982.

Reichenbach, Carl Hempel and Kurt Grelling – it can often be asserted that the true flowering of their thought and influence occurred precisely through formal or informal collaboration with their teachers or contemporaries in Austria.³ Of quite specific interest for our own purposes is the fact that almost all such philosophers were based in Berlin, where the ‘Society for Empirical Philosophy’ was established in 1928 as a counterpart to the Schlick circle in Vienna. Why, then, was the new scientific, logically empiricist philosophy, insofar as it found a home in Germany at all, concentrated so heavily in the single city of Berlin? And why, of all the cities in Europe, should this philosophy have taken root so firmly in Vienna, Prague and Lemberg?

2. *Philosophy and Politics*

When A. J. Ayer arrived in Vienna in late November of 1932, spending a protracted honeymoon of just over three months in Austria before returning to Oxford to write *Language, Truth and Logic*, the Schlick circle was at the very height of its activity. It had already organized its first two international conferences, and at the first of these, held in Prague in 1929, it had distributed copies of its manifesto, the “Wissenschaftliche Weltauffassung” or “Scientific Conception of the World”. This was written, effectively, by Neurath, in collaboration with Carnap and Hahn (and to a lesser extent other members of the circle), who served to temper some of Neurath’s wilder flights of fancy. The patrician Schlick, to whom the manifesto was dedicated, was less than satisfied with the result. This was first of all because he was not taken by the conception of the circle as a ‘movement’ of any sort, favouring a more modest and more narrowly scientific approach:

Schlick hated everything that smacked of agitation, was against it all: ‘It is not necessary for us to agitate: that we can leave to the political parties: in science we say what we have found, we hope to say the truth; and if it is the truth, then it will win out.’ (Haller and Rutte 1977, p. 31)

But it was also because he was distressed by the political tone of the piece, and more specifically by those portions which suggested some sort of alignment of

3. There are of course exceptions to the thesis expressed in the text, above all Frege (though even here we can point to Wittgenstein’s role in disseminating Fregean ideas). Other exceptions include Helmholtz, Ostwald, Hilbert, Nelson (the latter exerting an important influence on Grelling and on Dubislav), and also Oswald Külpe (who exerted an influence on Bühler, Popper and the Berlin Gestaltists and who was himself influenced by Mach). All of these were, however, on the *fringes* of German philosophy, even if — as in the case of Weyl or Hilbert — they distinguished themselves in other fields. The thinking in the area of the philosophy of science of German philosophers truly belonging to the mainstream German tradition — for example that of Natorp and the lesser Neo-Kantians — has, in contrast, been almost entirely forgotten, or it has been resurrected precisely in investigations of the thinking of philosophers, such as Carnap, who were allied to the Austrian tradition (see for example Runggaldier 1984, Friedman 1987, Sauer 1989, Coffa 1991).

logical positivism with socialism and with the movement for workers' education in Vienna at the time.

The circle had already by 1932 taken over – with the group around Reichenbach in Berlin – the journal *Annalen der Philosophie*, renaming it *Erkenntnis*. And it had published some six volumes of its series of *Schriften zur wissenschaftlichen Weltauffassung*, including works by Richard von Mises (brother of the economist Ludwig), and by Carnap, Schlick, Neurath and Philipp Frank, together with a peculiar work, entitled *On the Biology of Ethics: Psychopathological Investigations of Guilt-Feelings and the Formation of Moral Ideals: A Contribution on the Essence of the Neurotic Human Being*, by a certain Otto Kant.⁴

While Ayer does not address the question as to why it should have been Vienna, rather than Königsberg or Tübingen or Marburg, that was enjoying such a peculiar flowering of scientific philosophy at the time, his autobiography does contain one remark on what he saw as the political role of the group around Schlick:

The members of the Vienna Circle, with the notable exception of Otto Neurath, were not greatly interested in politics, but theirs was also a political movement. The war of ideas which they were waging against the Catholic church had its part in the perennial Viennese conflict between the socialists and the clerical reaction. (Ayer 1977, p. 129)

A thesis along these lines has been argued quite seriously by the Viennese sociologist-historian Friedrich Stadler, who provides us with a great mass of documentation to support his case. Stadler suggests that we see the University of Vienna in the interwar period as split into 'two camps':

on the one side, in the realm of scientific philosophy, there dominated democratic (enlightenment, liberal, socialist) tendencies; on the other side there was a spectrum of almost all forms of anti-democratic feeling, from neo-romantic conservatism to fascist-totalitarian outgrowths. Thus it is tempting to see the philosophical life as part of the fierce party-political *Kulturkampf* of the time, between the bourgeois camp and the workers' movement. (Stadler 1979, p. 42)

In regard to Austrian society in general, a 'two camp' thesis of this sort has a certain plausibility. Yet the idea that the flowering of scientific philosophy in Austria can be accounted for by regarding the Schlick circle as a manifestation of Austrian socialism, or of anti-clericalism, seems to be at best the product of a certain sort of over-tidy wishful thinking. Socialist anti-clericalism did not, after all, lead to similar phenomena in France, or Spain, or Italy; but more importantly the thesis in question is not able to cope with the fact that so few important Austrian philosophers of science, and so few of the members of the

4. A complete list of the publications of the circle is given in Soulez (ed.), pp. 346f., which also contains other useful supplementary material on the wider Austrian background of the Vienna circle.

Vienna circle – Neurath, Hahn and Carnap constituting here the principal exceptions – were of socialist persuasion?⁵

Neurath was, it must be admitted, the most vocal and the most ardently propagandistic of the group around Schlick. It was Neurath's conspicuous advocacy of crackpot schemes for 'international planning for freedom' and for an 'economy in kind' as a substitute for prices and markets⁶ which dissuaded Hayek from making overtures to the group after his interest had been sparked by his friend and fellow member of the Mises circle Felix Kaufmann.⁷ And as the case of Schlick himself makes clear,⁸ it would be overly simplistic to see the circle in particular or Viennese scientific in general as in any sense a part of the Austrian socialist movement. Certainly it is interesting that Austrian scientific philosophy (and above all the thought of Mach) exerted some influence upon the Austro-Marxist movement, for instance in the case of Friedrich Adler. And another Austro-Marxist, Otto Bauer, came to value the work of the Vienna circle enough to view logical positivism as pointing the way forward for Marxist materialism itself. But the idea of a two camp theory which would align all honest, scientifically-minded thinkers in Vienna with progressivism, positivism and the Viennese socialist city government, and would have them standing opposed to Catholicism, fascism and other dark forces, breaks down precisely when confronted with liberal or conservative intellectuals like Schlick, Kraft, Waismann, Kaufmann, Mises or Hayek.

But how, then, are we to explain the fact that, as far as achievement and wider influence is concerned, the philosophy of science was the dominant branch of philosophy in Austria?

A more subtle answer to this question, due to J. C. Nyíri, might read as follows. On the one hand one can point to the fact that, while the Austrian Empire was the equal of (for example) Germany in the cultural field, it lagged behind its richer and more developed neighbours to the west in matters of intellect and science. The Habsburg Empire had witnessed a relatively late process of urbanization, bringing also a late development of those liberal habits and values which would seem to be a presupposition of the modern, scientific

5. J. C. Nyíri has argued that there is a conservative and traditionalist current running through the whole of Austrian philosophy of science. See his 1986 and, on the specific case of Wittgenstein, chs. 1 and 2 of his 1992.

6. See Neurath 1973, esp. chs. 5, 8 and 11.

7. Personal communication of Professor Hayek.

8. On Schlick's political opinions see, again, the interview with Heinrich Neider: 'Schlick was a man who had no sympathy at all for politics and the state; he was a liberal in the old sense, for whom the fire brigade and the police were admitted as at best a necessary evil. Otherwise one did not need the state at all.' (Haller and Rutte 1977, p. 24)

attitude. It therefore lacked institutions and traditions of scientific research of the sort that had been established and cultivated especially in Germany throughout the 19th century. On the other hand, as the more liberal and enlightened ways began to be established in Austria – effectively in the second half of the nineteenth century – the desire to enjoy the various trappings of a modern enlightened culture made itself strongly felt. The Austrians were not, however, in a position to summon forth the means to create serious and reputable institutions and traditions of science in the narrow sense. This, as Nyíri puts it, created ‘a vacuum which the *theory* of a practice so attractively pursued elsewhere could then fill’ (1986, p. 143). This thesis is illustrated particularly clearly by the case of Mach, whose lack of funds for serious experiments in physics seems to have constrained him to turn instead to the (cheaper) fields of physiology and psychology as also to work in the history and philosophy of science.

An account along these lines is supported further by pointing to the absence in the Empire of any entrenched national philosophy of the Kantian or Hegelian sort.⁹ This implied that, when the opportunity for the establishment of a scientifically oriented philosophy in Austria presented itself, there was very little of substance against which the new philosophical developments had to compete. Catholic Austria was largely free of that influence of German idealist metaphysics which has done so much to thwart the development of exact philosophy in Germany itself. This was not least in virtue of the fact that the works of both Kant and Hegel, as notorious effluvia of the French revolution, were for a time included on the Papal index of prohibited books. Their place was taken by the German ‘*Popularphilosophie*’, a watered-down and popularized version of enlightenment doctrines derived from Leibniz and Wolff, the canons and textbooks of which were imposed upon the institutions of learning throughout the Empire. This state of affairs was to end only with the educational reforms after 1848, leaving the way clear for more positive developments, some of which will be considered below.

This is in contrast to the German case, where the strength of idealist metaphysics had derived in no small part from the fact that it was closely associated with the development both of German national consciousness and of the German nation itself, so that Kant, Hegel, Fichte and Schelling have come to occupy an entrenched position in German thought and feeling of a sort that is unparalleled in any other culture. Certainly philosophy was at no time rooted in this way in the structure of the Austrian state. An Empire which was at best an accidental compromise, a dynastic convenience of the Habsburg family,

9. Nothing is as simple as one might wish, and there were on both sides exceptions to the general tendencies referred to in the text. For a more rounded picture see Sauer 1982, who makes clear just how much – and how little – was known of Kant in Austria at the time when his influence in Germany was most intense.

seemed indeed to be lacking in all potential for legitimation on the plane of philosophy.¹⁰ The primary legitimacy of the Empire was seen as lying much rather in its role as the last bulwark of Catholic Christianity against the expansionist powers of Russia and Turkey to the east.

There may be a further reason for the absence in Austria of a counterpart to German idealist metaphysics. For it seems that the Austrians, similar in this respect to the English, have tended to react with suspicion in the face of the more grandiose forms of metaphysics popular in Germany. This may explain why those native German philosophers who have favoured painstaking argument and careful empirical work over grandiose speculation were so often able to find a receptive audience precisely in Austrian intellectual circles. It may explain also why philosophers in Germany did not, for the most part, allow themselves to be influenced by Anglo-Saxon ideas (though there were in addition political and economic reasons for the Anglophobia of many Germans in the nineteenth century, as also for certain contrasting Anglophile feelings of the Austrians in this same period). Kant is in this respect something of a special case, since he stands at the beginning of the new developments in German philosophy and thus inherits many of the virtues of his predecessors. Kant, it is true, attempted a reconciliation of empiricism and rationalism. As we shall see, however, this reconciliation was of a quite different sort from that which was achieved on the part of Austrian philosophers such as Brentano.

3. *The Neurath-Haller Thesis*

Much of the previous section consisted in the attempt to provide an explanation of developments in the intellectual or cultural sphere by appeal to underlying social or economic factors. Explanations of this kind have been found tempting by Marxist thinkers and by other advocates of a broadly economic approach to human behaviour. Where, however, we are dealing with complex movements of thought and doctrine, such explanations can be at best only partial. For they cannot give us insight into the precise intellectual content of the movements in question. Why did the Austrians' initial substitute for true scientific development take precisely these (phenomenalist and physicalist) forms, rather than those? What is to account for the peculiar blend of British empiricism and Russellian logic which provided the basic framework within which, in their various ways, the members of the Schlick circle would operate?

Clearly, and for all the dominance of schools and movements in any particular case, we must point to the influence of specific *individuals* if we are to be in a position to provide satisfactory answers to questions such as these.

10. Weiler 1986 is a strong statement of this thesis, and of its implications for an understanding of the peculiarities of Austrian philosophy. For a treatment of alternatives to this thesis see however Grassl and Smith 1986.

And there are a number of candidate individuals who come to mind in this connection, including Boltzmann (whose vision of a unitary science made itself felt not only among physicists but also in the wider intellectual community in Vienna) and Wittgenstein (whose *Tractatus* exerted a not inconsiderable influence on both Schlick and Carnap in precisely the formative years of the Vienna circle). We may presume, reasonably, that no social or economic explanation of the genius of Boltzmann or Wittgenstein (or Gödel, or Einstein) would be forthcoming. Even when all of this is granted, however, it would still be insufficient to look at individuals in abstraction from the wider social and institutional context in which they worked. This is not only because the individual is shaped by his or her surrounding culture. It is also, and more importantly, because his ideas will be able to take root in this culture only to the extent that they strike a congenial chord in the thinking of those to whom they are addressed. More importantly still, however, an individual, even an individual of genius, will be able to exert an influence upon his contemporaries only to the extent that there are *institutions* which can facilitate the dissemination of his ideas.

Hence there is a need, in regard to our own specific problem, to provide a mixed explanation, one that makes room both for institutional and economic factors of the kind so far considered and also for the serendipitous role of individuals. A forceful and coherent explanation along these lines has been provided by Neurath himself, in the section labelled “Prehistory” of the Vienna circle manifesto already mentioned above, and I shall here deal in turn with each of the four main components in Neurath’s account.

First, the fact that Vienna provided especially fertile soil for the development of the scientific conception is, Neurath argues, ‘historically understandable’ as a consequence of the growth of liberalism in Vienna in the second half of the nineteenth century. Indeed Neurath claims that liberalism was in this period:

the dominant political current in Vienna. Its world of ideas stems from the enlightenment, from empiricism, utilitarianism and the free trade movement of England. In Vienna’s liberal movement, scholars of world renown occupied leading positions. Here an anti-metaphysical spirit was cultivated, for instance, by men like Theodor Gomperz (who translated the works of J. S. Mill), and by Suess, Jodl and others. (Neurath 1929, p. 301 of translation, amended slightly)

This liberal atmosphere fostered also, Neurath tells us, the development in Austria of scientifically oriented popular education – leading eventually to the school reform movement of the 1920s, in which Wittgenstein, perhaps inadvertently, participated during his time as a school teacher in Lower Austria.

Secondly, Neurath points out that Mach, too, was a product of this Viennese liberal enlightenment, which was as it were compressed, in Austria, into the short span of a few decades. His formative years as student and *Privatdozent* were spent in Vienna, where his political attitudes – subsequently to reveal themselves in his activities as Rector of the still unified University in Prague –

were shaped. These same attitudes then manifested themselves also, Neurath suggests, in Mach's philosophy of science, and specifically in his attempt to 'purify' empirical science of metaphysical notions:

We recall his critique of absolute space which made him a forerunner of Einstein, his struggle against the metaphysics of the thing-in-itself and of the concept of substance, and his investigations of the construction of the concepts of science from ultimate elements, namely sense data. (*Op. cit.*, p. 302)

The influence of Mach and of his successor Boltzmann, Neurath now argues, 'makes it understandable' why there was in Vienna 'a lively dominant interest in the epistemological and logical problems that are linked with the foundations of physics'. This influence was, certainly, of lasting importance, despite the fact that, after only six years as professor in Vienna, Mach was forced by ill-health to retire. Thus Hayek, for example, reports that he and his contemporaries upon arriving in Vienna to take up their studies in the immediate post-war years 'found in Mach almost the only arguments against a metaphysical and mystificatory attitude' such as was manifested by the dominant philosophers in the University at the time:

from Mach one was then led on to Helmholtz, to Poincaré and to similar thinkers, and of course, for those who went into the matter systematically such as my friend Karl Popper, to all the natural scientists and philosophers of the period (Hayek 1966, pp. 42f.).

The quite special importance of Mach for the Vienna circle itself can be seen in the fact that they gave the name 'Verein Ernst Mach' to the public lecture society which they founded as a supplement to their other activities in 1929.

Thirdly, Neurath mentions a number of Viennese social thinkers, from both the Marxist and the non-Marxist camps, who had 'served consciously in the spirit of the enlightenment' in the late nineteenth century.¹¹ Above all he mentions the work of Carl Menger, pointing out that 'in the sphere of political economy, too, a rigorously scientific method was cultivated by the school of marginal utility' which Menger had founded in 1871. Menger's methodological individualist doctrines will be shown below to stand in opposition to German historicist and collectivist doctrines in the sphere of economics in a way which parallels the opposition of, say, Bolzano or Mach to Kant and Hegel. Moreover, these doctrines constitute a synthesis of liberal political and economic ideas with the affirmation of the importance of scientific rigour of just the sort that is required by Neurath's thesis.

Fourthly, and most tellingly, however, is the fact that, apart from Mach, the most important individual philosopher mentioned by Neurath in his account of the Viennese prehistory of logical positivism is Franz Brentano. As Neurath himself puts it, the ground was cleared for the endeavours of the Vienna circle

11. *Op.cit.*, p. 303. A comprehensive discussion of this aspect of the development of positivism in Austria is provided by Stadler 1982.

in the direction of a reform of logic and of a concern with problems of foundations also ‘from quite another quarter’:

through Franz Brentano (professor of philosophy ... from 1874 to 1880, later *Dozent* in the philosophical faculty). As a Catholic priest Brentano had an understanding for scholasticism; he started directly from the scholastic logic and from Leibniz’s endeavours to reform logic, while leaving aside Kant and the idealist system-philosophers. Brentano and his students showed time and again their understanding of men like Bolzano and others who were working toward a rigorous new foundation of logic. (*Op. cit.*, p. 302)

Brentano, too, came to be marked to some extent by the Austrian liberalism of the nineteenth century (thus for example he played an instrumental role in commissioning the young Sigmund Freud – who had been for a time a devoted admirer of Brentano’s work – to translate one of the volumes in the already mentioned Gomperz edition of the works of Mill¹²). Of Brentano’s students, Neurath mentions in particular Alois Höfler (1853–1922), who had organized numerous discussions on Brentanian perspectives in logic and foundations under the auspices of the Philosophical Society at the University of Vienna, a forum founded by Brentano and Höfler in which, as Neurath puts it, ‘the adherents of the scientific world conception were strongly represented.’

Neurath mentions also ‘Alexius von Meinong, a member of the circle of Brentano’s Viennese students from 1870–1882 and later professor in Graz, whose theory of objects has certainly some affinity to modern theories of concepts’. (Neurath is presumably referring here to the similarities – pointed out also by Carnap – between Meinong’s work on higher-order objects and Carnap’s own *Logical Structure of the World*.) He mentions also Meinong’s pupil Ernst Mally, who had been one of the first Austrians to work on the logic of Whitehead and Russell and would later play a seminal role in the development of deontic logic.

Brentano was not only sympathetic to a rigorously scientific method in philosophy; he shared with the logical positivists also a certain anti-metaphysical orientation¹³ and his work involves the use of methods of language analysis similar in some respects to those developed later by philosophers in England. Rudolf Haller has indeed argued that it makes sense to point to these features – which were shared in common not only by Brentano and the logical positivists

12. The volume in question is a collection of Mill’s writings on female emancipation, socialism and Plato. On Freud and Brentano see Hemecker 1991. It is worth mentioning here also that Brentano was no less responsible than Mach for the strong reception of the ideas of the British empiricists in Austria. Consider for example Brentano’s work on Reid and on the psychology of Hamilton and the Mills, Bain and Spencer (e.g. in his 1874), and also the work of Meinong on Hume (e.g. his 1882) and of Husserl on Locke and Berkeley (e.g. in the 2nd Logical Investigation).

13. More than 100 pages of his *On Knowledge* (1925) are devoted to a critique of Kant entitled “Down With Prejudices! A Warning to the Present in the Spirit of Bacon and Descartes to Free Itself from All Blind A Prioris.”

but also by thinkers as diverse as Mach and Wittgenstein – as constituting what might be called a ‘typically Austrian philosopher’.¹⁴ Haller’s writings on the history of Austrian philosophy¹⁵ have not merely extended and clarified the Neurath interpretation; they have also contributed to our understanding of German-language philosophy as a whole. For Haller has shown that it is possible to distinguish within this whole a coherent alternative to the speculative idealisms predominant in Germany proper. But now, if this Neurath-Haller thesis can be accepted, if, in other words, it can be accepted that there exists a separate and internally coherent tradition of *Austrian* philosophy within German-language philosophy as a whole, then it follows that the Vienna circle itself comes to be linked, via Brentano, to Catholic scholasticism. And one could go further, and point to the *method* of communal philosophical argument – of philosophizing by means of a sometimes ritualized process of discussion – as something that is shared, not merely by Brentano and the medieval schoolmen, but also by Schlick, with his Thursday-evening discussions, and by Wittgenstein in his cell in Cambridge.

The Neurath-Haller thesis is not without its problems however. Thus while it seems that the works of Meinong and Brentano were mentioned in discussions of the Vienna circle, in the case of Brentano, at least, it is almost certain that his writings were discussed principally because his work on ethics was chosen by Schlick as a special object of criticism. Moreover, J. C. Nyíri has pointed out that there is one group of influential Austrian philosophers – whom he refers to as ‘sociologizing epistemologists’ – in relation to which the Neurath-Haller thesis does not apply. He mentions in particular the names of Ludwig Gumprowicz and Michael Polanyi, but also Fleck, again, and the later Wittgenstein, in a line extending in our own day to T. S. Kuhn, all of them defenders of a view according to which all ideas, and in particular all scientific ideas, are intrinsically social phenomena.¹⁶

The thesis has been attacked most especially by Viennese sociologists and historians of science who are reluctant to accept the idea that the ‘two camps’ of Catholic reaction and progressive socialist neopositivism should become confused together in the way described. Friedrich Stadler, in particular, has suggested that – in contrast to the picture of the typical Austrian philosopher painted by Neurath and Haller – the influence of logical positivist ideas, or of scientific philosophy in general, was in fact rather small, at least as concerns the official life of the University of Vienna in the period 1918–1938. What

14. Compare also Rutte 1977 and G. Bergmann 1967, esp. pp. 4ff.

15. Collected as Haller 1979; see also his 1981, 1986a, 1988, 1993 and the (in many respects definitive) essay “Zur Historiographie der österreichischen Philosophie” of 1986.

16. Nyíri 1989, p. 602.

predominated, both in lecture courses and in dissertation topics, was the history of philosophy of a rather old-fashioned sort, dealing in Kant, Schopenhauer, Spinoza, Plato, Nietzsche. The circle around Schlick can be seen from this point of view to have consisted largely of philosophical cranks and dabblers, individuals who would be taken seriously only later – and then primarily outside the borders of Austria herself. What is important for our purposes, however, is not the education of the inter-war generation in Vienna, the generation which would come to prominence in the period (say) from 1938 to 1945. Rather, we are interested in those intellectual currents which had shaped and determined the thinking of specific members of the generation already mature in the inter-war period, and in particular given rise to such schools as the Schlick and Mises circles. And to pick out such currents it will not suffice simply to examine the sheer numbers of lectures or dissertations on different themes – for this is to ignore just those differences of individual achievement and wider influence which are here all-important.

4. *The School of Franz Brentano*

Franz Brentano was born in 1838 in Marienberg, near Boppard on the Rhine, of a distinguished Italian-German family whose forbears included Clemens Brentano, Carl von Savigny and Bettina von Arnim. He studied in Berlin under the Aristotle scholar Adolf Trendelenburg, and later in Würzburg, where he took holy orders in 1864 and where, from 1866, he taught philosophy. In part as a result of difficulties in accepting the dogma of Papal infallibility, Brentano withdrew from the priesthood in 1873 and this necessitated also a withdrawal from Würzburg. In 1874 he was appointed professor of philosophy in Vienna, where he taught for some twenty years with great success. Brentano moved to Florence in 1896 and from there to Zurich in 1915, where he died two years later.¹⁷

Brentano remained a quite singularly powerful figure in Austrian philosophy even when, for legal reasons connected with his marriage as an ex-priest, he was effectively forced to resign his chair in 1880. And it is one of the tragedies of Austrian philosophy that, due to the repeated interventions of the Emperor, Brentano was not re-appointed to a professorial post in Vienna after his marriage, despite the fact that, year after year, his re-election to such a post was carried *unico loco* by the faculty itself. Brentano remained in Vienna as a mere *Privatdozent* until 1895. He was thereby able to exert his influence in Vienna as a teacher, but his students and disciples were largely forced to turn elsewhere in order to pursue their philosophical careers. Had Brentano been able truly to

17. On Brentano's life and on the historical context of his thinking see Werle 1989. On Brentano in Italy see Albertazzi (forthcoming).

establish himself and his school in the University in Vienna, then it seems clear that the philosophy of Austria in this century would have been significantly different. It may, therefore, have been one somewhat ironic consequence of the Emperor's veto of Brentano's appointment in the name of Christian propriety that he thereby left the way clear in Vienna for just such positivistic and atheistic movements of thought as were nurtured by Schlick and his circle in the '20s and '30s.

Another consequence was that Brentanian ideas came to predominance in other centres of learning both within and without the Empire. Thus centres of Brentanian or of Brentano-inspired philosophy were established particularly in Prague and in Lemberg, and Brentano's students held chairs also in Graz and Czernowitz, as well as in Berlin, where Stumpf, formerly in Prague, was to serve as professor in the Humboldt University for over thirty years.

Brentano's influence was not restricted to philosophers. Among those who came under his spell were also a number of important thinkers in the Church, as well as such figures as T. G. Masaryk (himself initially a philosopher and later founder and first President of the erstwhile Czechoslovak Republic). What is most remarkable about Brentano, however, is the extent to which his principal philosophical heirs – Kasimir Twardowski in Lemberg, Christian von Ehrenfels and Anton Marty in Prague, Carl Stumpf in Prague and Berlin, as well as Meinong and Husserl – distinguished themselves by initiating new and influential schools and movements of their own, not only in philosophy but also in other fields, movements resting in each case on a more or less radical transformation of Brentanian doctrines. A table of Brentano's students and of his students' students would thus come close to embracing all of the most important philosophical movements of the twentieth century on the continent of Europe.

Thus Twardowski (1866–1938), on the basis of work on logic and psychology inspired by Brentano (and due in no small part to his own brilliance as a teacher), established almost single-handedly that tradition of exact philosophy in Poland which was to include all of the important figures involved in Polish philosophy in the first decades of the present century. Present at different times in Lvov and falling under Twardowski's influence were, *inter alia*, the historian of philosophy Władysław Tatarkiewicz, the phenomenologist and aesthetician Roman Ingarden, the logicians Stanisław Leśniewski, Jan Łukasiewicz and Tadeusz Czeżowski, as well as philosophers later closely allied to the Vienna logical empiricist movement such as Tadeusz Kotarbiński and Kazimierz Ajdukiewicz. Members of the circle around Twardowski were gradually transplanted to Warsaw, where Leśniewski, especially, was dominant, and it was from there that contacts with the Vienna circle were initiated in the spring of 1930 by Alfred Tarski. Carnap in turn visited Warsaw in November 1930. He gave lectures to the Warsaw Philosophical Society and had discussions

with Leśniewski, Kotarbiński and Tarski at just about the time when Tarski himself was developing his semantic conception of truth.¹⁸

Ehrenfels (1859–1932), professor in Prague for more than thirty years, was above all responsible for initiating that revolution in psychological research which is associated with the concept of Gestalt, a revolution to which contributions were made also by Ehrenfels' teacher Meinong in Graz, by Ehrenfels' student Wertheimer in Prague, and subsequently by Karl Bühler and his associates in Vienna. The group around Bühler (to which the young Karl Popper belonged), promulgated a naturalistic philosophy of Gestalten similar, in many respects, to the work of Stumpf. Egon Brunswik, another member of this Vienna Gestalt psychological circle later allied himself with the neopositivist movement newly transplanted to America, serving as one of the advisory editors to the *International Encyclopedia of Unified Science* founded by Neurath in 1938.

Marty (1847–1914) was a native of Switzerland who, following the example of his teacher Brentano in Würzburg, took holy orders in 1870. He was professor, successively, in Czernowitz and Prague, and was responsible for applying Brentano's ideas in the areas of linguistics and the philosophy of language, where his writings anticipated in interesting ways contemporary work on linguistic universals.¹⁹ Marty played a role also in the early development of Brentanian ideas on language in the direction of a theory of speech acts, and exerted an influence in this respect both on Bühler and his followers in Vienna and on Roman Jakobson and other members of the Prague linguistic circle.

As in Vienna, so also in Prague, the philosophical atmosphere in the first decades of the century had been determined to no small extent by the work of physicists such as Mach, Einstein and Frank. Yet it is clear that a no less important role in determining the scientific orientation of Prague philosophy was played by Marty, Stumpf, Ehrenfels and other Brentanians, as well as by phenomenologically-oriented psychologists such as Ewald Hering. Moreover, while the two groups were often doctrinally at loggerheads, particularly over the theory of relativity itself, which Brentano charged with incoherence, there were examples of amicable collaboration across this doctrinal divide. Thus Einstein was to be a life-long friend of Wertheimer²⁰ and also of Marty's student and assistant Hugo Bergmann, who was in turn a close friend of Franz Kafka. Kafka

18. Carnap 1963, p. 31.

19. See Mulligan (ed.) 1990.

20. The two were colleagues in Berlin and retained their contacts when both had emigrated to America. See the chapter "Albert Einstein and Max Wertheimer: A Gestalt Psychologist's View of the Genesis of Special Relativity Theory" in Miller 1984. All four of the Berlin Gestalt psychologists – Wertheimer, Köhler, Koffka and Lewin – had an interest in physics.

and Bergmann together attended the philosophy lectures of Ehrenfels, Marty and other Brentanists as part of their studies in the German University in Prague,²¹ and Bergmann also initiated Kafka into the mysteries of a Brentanist discussion group which, as Bergmann writes,

called itself the 'Louvre Circle' after the Louvre coffeehouse where we used to gather. Later on, we got together in the drawing-room of my then mother-in-law, Berta Sohr-Fanta, where Einstein was a frequent visitor when we were reading Hegel's 'Phenomenology of the Spirit'. I scarcely remember whether Einstein took part in these readings. Yet I well recall a popular lecture he held before this score of non-physicists on the special theory of relativity. (Bergmann 1974, p. 389)

Bergmann himself was the author of books on Brentano's concept of evidence and on the philosophy of Bolzano, dealing especially with the latter's logic and philosophy of mathematics. On the other hand he was the author of a volume on *The Controversy Concerning the Law of Causality in Contemporary Physics*, dedicated 'In memory of my teacher Anton Marty' and described by Einstein in his Foreword to the book as 'promoting the best in our present-day attempts at merging physical and philosophical thought'. (1929, p. 395 of translation)

Stumpf (1848–1936) was born in the village of Wiesentheid in Lower Franconia (Bavaria) from where he moved to the University of Würzburg in 1865. In 1866 he began a close collaboration with Brentano which extended to 1874 when Brentano left for Vienna. Stumpf himself was professor in Würzburg from 1873, before leaving for Prague in 1879 and going on from there to Halle in 1884, where he would serve for a time as teacher and colleague of Husserl. After a period in Munich, Stumpf was called in 1894 to serve as professor of philosophy in Berlin, charged also with the explicit task of establishing there an institute of psychology. It was in this institute that his most important students and collaborators – Wertheimer, again, but also Wolfgang Köhler, Kurt Koffka and Kurt Lewin – would establish the so-called Berlin school of Gestalt psychology.

Stumpf's influence on his Gestaltist students was two-fold. On the one hand he gave them a rigorous training, especially in the foundations of psychology²² – echoing in this respect the work of his own teacher Brentano. And on the other hand he conveyed to them an understanding of and a respect for philosophy as a scientific enterprise in its own right – as a science of the most general properties (both material and psychological) of what is real. Philosophy, in Stumpf's eyes, stands to the physical and psychological sciences in much the same relation as, say, logic to the sciences of language.

21. On Kafka and Brentano see Smith 1981.

22. See Ash 1982, pp. 30–62 for an extensive treatment of the political machinations in favour of the new 'scientific philosophy' which led to Stumpf's appointment in Berlin.

A clear illustration of the links between scientific philosophy in Berlin and Vienna is provided by the case of the Austrian novelist Robert Musil. Musil studied under Stumpf in Berlin from 1903 to 1908, writing his doctorate on the philosophy of Mach.²³ He enjoyed friendly contacts in this period with Gestalt psychologists such as Köhler and von Allesch, and Gestaltist ideas make themselves felt at a number of places in Musil's novel *The Man Without Qualities*. Musil was in fact tempted, on completing his studies in Berlin, to accept an invitation from Meinong to serve as his assistant in Graz, and he enjoyed contacts with the positivists also, and in particular with Richard von Mises, in whose home in Berlin he was a regular guest.²⁴

Neurath, too, studied in Berlin in the early years of the century, and so also, from 1906 to 1908, did Ludwig Wittgenstein. For our purposes here, however, it is the manifold links between the Berlin Gestalt theorists and a later generation of scientific philosophers in Berlin that will be of importance. Thus we know that Kurt Lewin was involved with Carnap and Reichenbach in the earliest efforts to cultivate a tradition of scientific philosophy in Germany, and both he and Köhler actively participated in the discussions of the Reichenbach group in Berlin.²⁵ Lewin's paper on the transition from Aristotelian to Galilean modes of thought in biology and psychology was published in the first volume of *Erkenntnis*, and a paper by Köhler on Boltzmann appeared in volume 2 of the same journal. Köhler's book on *Physical Gestalten at Rest and in the Stationary State: An Investigation in Natural Philosophy* (1920), an attempt to show that the Gestalt structures given in experience and in the world of organic matter are present also in the purely physical realm, was greeted by many of the neopositivists as a substantive contribution to just that 'unity of science' which they themselves were advocating in their philosophical writings.²⁶

Positivist philosophy had until this time – largely as a result of the efforts of Mach and his British empiricist predecessors – been associated with the view that reality is at bottom composed of meaningless and intrinsically unrelated 'atoms of experience'. Thus Koffka could write at the close of his *Principles of Gestalt Psychology*:

If there is any polemical spirit in this book, it is directed not against persons but against a strong cultural force in our present civilization for which I have chosen the name positivism.

23. See Musil 1908; the work is critical of Mach in particular and of positivist philosophy of science in general; see Mulligan and Smith 1988.

24. On Musil and Husserl see Cellbrot 1988 and Mulligan 1990.

25. Carnap 1963, pp. 14, 30.

26. The work exerted an influence also on the thinking of Popper: see Popper and Eccles 1985, p. 24.

If positivism can be regarded as an integrative philosophy, its integration rests on the dogma that all events are equally unintelligible, irrational, meaningless, purely factual. Such an integration is, however, to my way of thinking, identical with a complete disintegration. (Koffka 1935, pp. 684f.)

Carnap responded to this Gestaltist challenge in his *Logische Aufbau der Welt*, which provides a general theory of how empirical knowledge is built up from a basis of sensory elements via ‘logical constructions’. In part under the influence of Wertheimer and Köhler, Carnap saw that there were reasons to reject the view that the elements of this system should be atoms or absolute simples. Rather he took as basis what he called ‘total experiences’, complex but analyzable instantaneous cross-sections of the content of an individual mind at a given time.²⁷ Ayer, too, is responding to the Gestaltist challenge for example when he remarks that the empiricism of *Language, Truth and Logic* ‘is not logically dependent on an atomistic psychology, such as Hume and Mach adopted, but is compatible with any theory whatsoever concerning the actual characteristics of our sensory fields.’ (1935, p. 122)²⁸

A special role in the attempts by the Austro-German logical positivists to come to terms with this challenge was played by a series of papers by Kurt Grelling and Paul Oppenheim, the first of which, on “The Concept of Gestalt in the Light of Modern Logic” was published in volume 7 of *Erkenntnis* in 1938.²⁹ The paper was designed to defend the Gestaltist position against (not entirely unjustified) charges that much of the then current talk of psychological and other sorts of ‘wholes not reducible to the sums of their parts’ was either meaningless or inherently confused. The aim of the paper was therefore ‘to suggest definitions which accomplish the following: when the concepts thus determined are appropriately inserted into sentences which appear characteristic of the Gestalt theorists, these sentences turn out neither trivial nor empty of sense.’ (Grelling and Oppenheim 1938, p. 211)

27. See Carnap 1963, p. 16, and compare his 1928, pp. 109, 122 of the translation. The Gestaltists could still, however, object that even this concession ignores the fact that our experiences are organized structurally not only within each instant but also across time.

28. A similar thesis as to the compatibility of positivism and Gestalt theory as a research programme in empirical psychology was defended also by Schlick (1925, ch. 34) and by Richard von Mises (1939, ch. 22). The Gestalt problem played an important role in the thinking of Gustav Bergmann, as also in the work of Eino Kaila (see his 1979), a Finnish thinker who is one of the four foreign philosophers (neither Austrian nor German) mentioned in the Appendix to the *Wissenschaftliche Weltauffassung* as ‘sympathetic to the Vienna circle’ or to the ‘scientific world-conception’.

29. The remaining two papers: “Logical Analysis of ‘Gestalt’ as ‘Functional Whole’” and “A Logical Theory of Dependence”, were scheduled to appear in volume 9 of *Erkenntnis* in 1939, an issue not distributed due to war conditions. These two papers, together with an English translation of the earlier work and a commentary by P. M. Simons, have been published in Smith (ed.) 1988.

Oppenheim was an example of that rare breed, a philosophically-minded banker, rich enough to pay philosophers to serve as his co-authors in a series of works in the philosophy of science published in the period from 1938 to 1978. One of the first such ventures was his paper with Grelling on Gestalt. Oppenheim collaborated also, *inter alia*, with Hempel, their collaboration leading not only to the classical Hempel-Oppenheim schema of deductive-nomological explanation, but also to a peculiar volume entitled *The Concept of Type in the Light of Modern Logic* (Hempel and Oppenheim 1936), an analysis of the work on human typology of psychologists such as Lewin, Kretschmer, and Jaensch. Oppenheim collaborated also with Nicholas Rescher (again in a paper on the “Logical Analysis of Gestalt Concepts”), as well as writing a series of books and papers of his own on the demarcation and ‘natural order’ of scientific disciplines and on the ‘static and dynamic laws of the formation of scientific concepts’.

Husserl (1859–1938), whose unequalled influence on the philosophy of continental Europe in the twentieth century needs no commentary, was responsible for transforming Brentano’s ‘descriptive psychology’ into his own somewhat more ambitious-sounding enterprise of ‘phenomenology’. Like so many others, Husserl was won for philosophy by the power of Brentano’s thinking and teaching, to which he was introduced by T. G. Masaryk already in 1877.³⁰ As Husserl himself put it in 1932: ‘Without Brentano I should have written not a single word of philosophy.’

The superficial view of the relations between phenomenology and the logical positivists has long centred around Carnap’s attack in the second volume of *Erkenntnis* on the ‘metaphysical nonsense’ of Heidegger’s *Sein und Zeit*. Thus it has been readily assumed that phenomenology as a whole appeared to Carnap and his associates as just another example of the bad old metaphysics which the Vienna positivist movement was aiming to destroy.³¹ The two camps were, certainly, at odds with each other in central points of doctrine. Thus it was the phenomenologist Roman Ingarden who presented one of the first formulations of the since much-contested criticism of the Vienna circle verifiability criterion of meaning – that the criterion is itself meaningless by its own lights – at the Prague World Congress of Philosophy in 1934. When one looks more closely, however, one sees that there are a number of respects in which members of the Schlick circle were influenced by Husserl’s phenomenology, even if only in the sense that, as in the case of the Gestaltist movement, phenomenology provided

30. Cf. Schuhmann 1988.

31. This point of view is belied, at least to some extent, by the fact that Carnap, having earlier studied under Frege in Jena, participated for a term in Husserl’s seminar in Freiburg before going on to Vienna in 1925 at the suggestion of Schlick. Carnap was later invited by Frank to come to Prague, where he held a chair in ‘natural philosophy’ for four years from 1931.

a substantive and influential group of problems which the positivists felt called upon to solve (or at least do away with, by whatever means).³²

As has been often noted, the very project of phenomenology – the project of providing a painstakingly adequate description of what is given in experience precisely as it is given – can be regarded simply as a more comprehensive and more radical version of phenomenalism in the traditional sense, so that Hermann Lübbe, for example, finds no difficulty in asserting that ‘Ernst Mach and other critical empiricists, regardless of their “positivism”, belong in the tradition of phenomenology.’ (1960, p. 91 of translation) The two strands of Austrian positive philosophy were at one stage so closely intertwined that Husserl could be considered as a potential successor to Mach in the chair in Vienna.³³ Guido K  ng has defended the view that there are quite specific parallels between Husserlian phenomenology and the project of ‘explication’ that is defended by Carnap in his *Aufbau*.³⁴ A view of this sort was advanced already in 1932 by Ernst Polak, a student of Schlick and man about town in Vienna – Polak was *inter alia* the husband of Kafka’s Milena – in a clearly Wittgenstein-inspired dissertation entitled *Critique of Phenomenology by Means of Logic*. The sense of phenomenology, according to Polak, ‘is logic (grammar in the most general sense), clarification of what we mean when we speak; its results are tautologies; its findings not statements, but explications’ (1932, p. 157).

As is seen from Wittgenstein’s own repeated employment of the terminology of ‘phenomenology’, particularly around 1929, it is primarily in regard to the problem of the synthetic *a priori*, of an ‘intermediary between logic and physics’, that Husserl’s thinking is crucial to the development of Austrian positivism. Husserl’s account of the synthetic *a priori* is indeed no less important to the Vienna circle than that of Kant,³⁵ for where Kant – in conformity with his special reading of what it is to be ‘synthetic’ – sees the realm of the synthetic *a priori* as residing in the relatively restricted and cognitively inaccessible sphere of transcendental consciousness, Husserl claims that there is a directly accessible *a priori* dimension across the entire range of experience – so that vastly more propositions turn out to be synthetic and *a priori* on Husserl’s view than on that of Kant – including such homely examples as ‘nothing can be both red and green all over’ to which Wittgenstein and the

32. Cf. Waismann 1979, e.g. pp. 67, 78f.

33. Sommer 1985, p. 13.

34. See K  ng 1975.

35. On Wittgenstein and phenomenology in general, see Spiegelberg 1968. On positivism, Husserl and the *a priori*, see Delius 1963, ch. 1, and also Visser 1979.

Vienna positivists devoted a great deal of their attention.³⁶ From the standpoint of the positivists, synthetic *a priori* propositions do not and cannot exist: all true propositions are either tautologies of logic or contingent truths relating to empirical matters of fact. For Husserl, in contrast, there are entire disciplines of synthetic *a priori* truths, including the discipline of phenomenology, and it is fascinating to observe the extent to which the positivists are driven to unsupported claims as to the ‘logical’ character of Husserl’s theses (or to *ad hoc* adjustments of the sense of ‘logical’) in the face of the quite evidently extralogical or ‘material’ character of many of his examples.

5. Brentano’s Philosophy: A Preliminary Outline

Our thesis, then, which is to be conceived as a strengthening of the Neurath-Haller thesis presented above, is that the Central-European traditions of logical positivism in particular and of scientific philosophy in general can be understood as a part of the exact or analytic philosophical legacy of Brentano. More specifically, they are a reflection of the interplay of the intellectual and institutional influence of Brentano and his school with developments in logic and in the philosophy of physics and mathematics inspired by Russell and Wittgenstein in Cambridge, by Mach and his successors in Vienna and Prague, and to a lesser extent also by Poincaré, Duhem, Einstein, and others elsewhere. Certainly there is a whole range of doctrines peculiar to the Vienna circle – verificationism, physicalism, behaviourism, emotivism in ethics – which were embraced neither by Brentano and his school nor by Mach or Russell or Wittgenstein. Thus one should take care, in making claims of the given sort, to keep in mind the originality of the members of the circle themselves. Further, there is a range of doctrines or issues – relating for example to intentionality and to axiology or general value theory – which pervade Brentano’s writings and are absent from the official canons of the Vienna positivists. Yet these differences do not affect the main thesis: that it was the influence of Brentano and of his followers in Vienna, Prague, Lemberg and Berlin which provided the crucial presupposition for the rise of scientific philosophy in Central Europe in the early decades of the present century.

As far as Brentano’s own philosophy is concerned, two stages can be distinguished: an early psychologically-oriented stage, when Brentano was concerned with the foundations of psychology as an exact science; and a later, ontologically-oriented phase, when Brentano adopted a doctrine of ‘reism’,

36. Such examples were drawn, too, from the domain of economics (for example the thesis that time preference is always positive), as is shown above all by the writings on economic methodology of Felix Kaufmann (for example his 1937). Kaufmann, initially a devotee of Husserl, published not only on the foundations of economics and on the philosophy of law and mathematics, but also on the foundations of science in general. See Zilian 1990.

according to which only things are properly to be accepted as existing. This reistic doctrine, as also the ‘doctrine of intentionality’ with which Brentano’s name is most commonly associated, will be dealt with at length in later chapters. Neither can be properly understood, however, without some grounding in Brentano’s early philosophy, a synthesis of Aristotelian, Cartesian and empiricistic elements in which a new sort of discipline, called ‘descriptive psychology’, plays a central role. This descriptive psychology is in fact seen by Brentano as a Cartesian science providing an epistemologically sure foundation for the entire discipline of philosophy, as also for scientific knowledge of other sorts. At the same time, however, Brentano conceives descriptive psychology as a new sort of empirical science, with its own empirical technique, a technique resting on our capacity to *notice* psychological distinctions between the different sorts of simple and complex mental acts, between the intuitive and non-intuitive components in psychic phenomena, between the various different sorts of phenomenally given qualities, boundaries and continua, and so on, and then also on our capacity to grasp certain necessary and intelligible relations between the elements thus distinguished.³⁷

The training in the discipline of descriptive psychology which Brentano’s students received can be seen to have instilled in them further an attitude of what we might call taxonomical (or ‘Aristotelian’) realism, a way of doing philosophy which will manifest itself repeatedly in the pages that follow. This involves, roughly speaking, the acceptance of five principles:

(i) that description is prior to explanation, in the sense that an explanation of given phenomena is of value only to the extent that we ‘know what we are talking about’, that we ‘understand ourselves’ when we refer to the phenomena in question; descriptive psychology is therefore prior also to that sort of experimental (or ‘genetic’) psychology which seeks to establish the laws governing the order of mental events as unfolding in time;

(ii) that the tasks of the philosopher and of the empirical scientist cannot and should not be pursued in separation; philosophy is to be pursued not in abstraction from other disciplines, but as part and parcel of our attempt to come to grips scientifically with the world and thus as forming a continuum with science;

(iii) that the general traits of reality exist only in whatever are the relevant instances and that it is the existence of *immanent universals* in the things which makes science possible;

(iv) that given segments of reality can be described by appropriate ‘empirical’ methods in a way that is – at some level of generality – adequate to the matters

37. On Brentano’s method see Baumgartner 1989 and Marek 1989. On Brentano, Aristotle and Descartes see Volpi 1989.

in hand; description proceeds not by the building of abstract models of the phenomena, but by concerning itself directly with the things themselves;

(v) that the appropriate form of description involves the construction of a taxonomy of the different kinds of basic constituent in whatever is the relevant domain and of the different forms of relation between them; hence the ontological theories of relations and of part and whole come to enjoy a uniquely privileged status within the edifice of science.³⁸

Brentano thus embraced a scientific realism in the spirit of Aristotle. This, however, was allied in his work with a Cartesian conception of scientific knowledge as *episteme*, and in consequence Brentano regarded the existence of an external world as at most probable. Like Hume, he denied outright the existence of a world similar to the world of common-sense experience.³⁹ It is, rather, in relation to the structures of our mental acts that Brentano's fundamental realism makes itself felt,⁴⁰ to the extent that his entire philosophy is centred around the *ontology of mind*.

Already in 1866 Brentano had set forth the fundamental elements of his scientific mode of philosophizing in the twenty-five theses which he defended in Würzburg on the occasion of his habilitation. The most influential of these theses, which was chosen by Richard von Mises as a motto for his textbook on positivism, reads as follows:

Vera philosophiae methodus nulla alia nisi scientiae naturalis est. (The true method of philosophy is none other than that of the natural sciences.)⁴¹

Brentano held that the method of the natural sciences is common to all the sciences, so that he is, in this respect an advocate of the unity of science and a critic of Dilthey's view according to which the so-called '*Geisteswissenschaften*' or human or moral sciences would somehow call for a special method of understanding or '*Verstehen*', as opposed to the 'explanation' of the natural sciences.

The first of Brentano's theses is a repudiation of (German) metaphysics as a whole:

Philosophia neget oportet, scientias in speculativas et exactas dividi posse; quod si non recte negaretur, esse eam ipsam jus non esset (Philosophy must deny that the sciences can be

38. See Brentano 1982, Pt. I, ch. II, Pt. II, chs. I and II; Stumpf 1873, ch. V; Husserl's 3rd Logical Investigation, and the further developments described in Smith and Mulligan 1982.

39. See his 1982, e.g. p. 14.

40. See, above all, the *Deskriptive Psychologie* of 1982 and the summary by Mulligan and Smith 1985.

41. This is thesis IV. See Brentano 1929, pp. 137ff.

divided into the speculative and the exact; because if this is not correctly denied, then philosophy itself would have no right to exist),

a view which sits neatly – and bravely – alongside the second thesis:

Philosophia et eos, qui eam principia sua a Theologia sumere volunt, et eos rejicere debet, qui, nisi sit supernaturalis revelatio, eam omnem operam perdere contendunt. (Philosophy must protest against the presumption of taking its principles from theology and against the assertion that it is only through the existence of a supernatural revelation that a fruitful philosophy becomes possible.)

Brentano in fact went so far as to protest against the view that universities should contain faculties of theology, precisely because theology cannot live up to the standards of science proper.

The thirteenth of his theses reads:

Nihil est in intellectu, quod non prius fuerit in sensu, nisi intellectus ipse. (Nothing is in the intellect which was not previously in the senses, except the intellect itself.)

It is in the sense of the Aristotelian empiricism that is here expressed that we are to understand the title of Brentano's *Psychology from an Empirical Standpoint* of 1874. Brentano took empiricism to be consistent with the view that we can grasp necessary relations (immanent universals) in what is given in experience. He therefore differed from the positivists in his belief that truly scientific knowledge, which means in his eyes an evident knowledge of *general laws*, is possible on the basis of experience.

Scientific induction is understood by Brentano as the process of establishing general laws starting from the observation of particular facts, as opposed to the more familiar kind of induction which attempts to use given particular facts as a starting point for predicting other particular facts. Further, Brentanian induction is not, as it was for Hume and Mach, a matter of habit or of 'thought economy': the intuition of lines and points, and of ourselves as intuiters of lines and points, gives us knowledge through abstraction of the concepts of geometry. The combination of such intuition and abstraction with processes of deductive reasoning then leads to evident, insightful knowledge of the laws holding in the geometrical sphere. The same combination can be employed to yield the basic concepts and associated evident laws also in other spheres of investigation, not least in philosophy, where for example the intuition of ourselves as judges leads to evident knowledge pertaining to concepts such as truth and existence.

Brentano's talk of 'intuition', 'evidence' or 'insightfulness' is alien to the spirit of Viennese positivism. Many of the positivists' critical writings are indeed devoted to the attempted refutation of claims made on behalf of intuition as a means of gaining knowledge, in favour of (public, scientific, repeatable) 'observation'. Schlick, too, in chapter 2 of his *General Theory of Knowledge*, criticizes what he takes to be Brentano's (and Stumpf's, and Husserl's) views concerning intuition and evidence. If, however, one looks more closely at

Schlick's own theory of 'observation statements', one discovers that he has himself presupposed precisely the views that he had earlier criticized.

For Schlick, in contrast to a relativist such as Neurath, believes that there are foundations for knowledge, that there are statements which are self-evident, i.e. not such as to derive their evidence from some other sphere. The process of understanding such statements is therefore 'at the same time the process of verifying them; I grasp their meaning at the same time as I grasp their truth.' (1934, trans. p. 385) Such observation statements are like simple tautologies in that our knowledge of their truth is immediate, so that there is no room for our being deceived. But they differ from tautologies in that they supply us with 'genuine knowledge of reality'.

Schlick's own preferred example of an observation statement is '[There is] yellow here now'. And as Chisholm has pointed out, if this statement is to be immune to deception then it can involve no reference to any external yellow sensum, but must involve reference only to our own present way of experiencing, so that it might best be rendered: 'I am-appeared-to-yellowly'.⁴² But now, as Chisholm also shows, this is to imply that Schlick's observation statements belong to the class of statements expressing experiences which are immediately evident in precisely the Brentanian (Cartesian) sense.

The Brentanian method of intuition and deduction is, be it noted, prior to scientific experimentation. Brentano held that, while experimentation may occasionally lead to new or more adequate intuitions, it must nonetheless be the case that a properly experimental science can arise only when the relevant basic concepts and laws have been established by intuition and deduction in the way suggested. For the experimental scientist who has not first established the nature of the entities with which he deals is in a certain sense experimenting in the dark. Measurement for measurement's sake (which Brentano saw in much of the work of Wundt and his successors) and the blind formulation of purely functional correlations may, by accident, lead to predictions of future particular facts. But it cannot lead to the kind of evidence or luminosity which, as Brentano insisted, is the hallmark of a scientific law in the fullest sense.

There is much in the above account of Brentano's position that is in need of further clarification. What has been said so far, however, should suffice to establish one central feature of Brentano's thinking, namely his high estimation of the importance and of the powers of science – to the extent that he saw science as embracing philosophy itself as a proper part.

42. See Chisholm 1982a.