The Analytic Turn in Early Twentieth-Century Philosophy

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Ever since I abandoned the philosophy of Kant and Hegel, I have sought solutions of philosophical problems by means of analysis, and I remain firmly persuaded, in spite of some modern tendencies to the contrary, that only by analysing is progress possible.
(Russell, *My Philosophical Development*, ch. 1)

[Introduction]

One of the most important developments in twentieth-century philosophy - arguably, *the* most important development, at least in the English-speaking world - was the rise of analytic philosophy. There has been increasing debate in recent years over what exactly 'analytic philosophy' means, as the term has been used in a wider and wider sense and it has become harder and harder to identify any common assumptions, methods or themes. But there is general agreement on its main sources: the work of Gottlob Frege (1848-1925), Bertrand Russell (1872-1970), G. E. Moore (1873-1958) and Ludwig Wittgenstein (1889-1951) in the period from roughly 1880 to 1920. (Frege's first book, *Begriffsschrift*, setting out his new logic, was published in 1879; and Wittgenstein's *Tractatus* was published in 1921.) More specifically, the origins of analytic philosophy are often dated to the rebellion by Russell and Moore against British idealism at the turn of the twentieth century. But there is little doubt that as Russell's and Moore's ideas were developed - in particular, as Russell became convinced that mathematics was really logic, and through Wittgenstein's early work - Frege's writings became increasingly influential. In the *Tractatus*, Wittgenstein critically engages with Frege's and Russell's ideas above all else, with the result that both Frege and Wittgenstein have taken their place alongside Russell and Moore as the acknowledged founders of the analytic tradition.

Central to Russell's and Moore's rebellion against idealism was the emphasis placed on analysis, as the remark cited above from Russell's *My Philosophical Development* indicates. But both Russell and Moore were notoriously unclear as to what exactly 'analysis' meant, and they use the term in a number of ways throughout their writings. At the time of their rebellion, however, the *decompositional* conception was undoubtedly dominant: analysis was understood as the process of decomposing something into its constituent parts. This conception is explicit in Moore's 1899 paper, 'The Nature of Judgment'. On the naïve realist view advocated in this paper, the world is composed of 'concepts', which are synthesized into propositions, both concepts and propositions being independent of us. Analysis is then accorded a fundamental role in Moore's epistemology: "A thing becomes intelligible first when it is analysed into its constituent concepts" (1899, p. 8).

Both Moore's naïve realism and the associated decompositional conception of analysis were endorsed by Russell in his initial rejection of idealism, but such a view faces obvious problems. How can we give an account of propositions about non-existent objects, for example? Much of Russell's subsequent philosophy is an attempt to think through and find solutions to such problems - the problems raised by adopting a decompositional conception of analysis in the context of repudiating idealism.[1] After the initial exuberance of his naïve realism, Russell gradually developed tools to cut back on his ontological commitments. This led first to his theory of denoting concepts, which was replaced within a few years by his theory of descriptions, on the basis of which he then developed his full-blown philosophy of logical atomism. By this time Wittgenstein,

too, having been Russell's pupil, was developing his own form of logical atomism, which found its definitive statement in the *Tractatus*.

How can this path to logical atomism, however, be thought to have given rise to a whole new tradition of philosophy? Naïve realism is hardly new, and even logical atomism has its precursors in the work of Leibniz, in particular. In any case, neither naïve realism nor logical atomism can be regarded as characteristic of analytic philosophy after the 1920s. More specifically, the decompositional conception of analysis which seems to lie at the heart of Moore's, Russell's and Wittgenstein's early work is far from new. In its general form, such a conception played a key role in Descartes' philosophy (inspired by his analytic geometry) and in Locke's empiricism, to take just two examples from the early modern period, and in the particular case of concepts, found its classic statement in Kant's account of analyticity.[2] So if decompositional analysis is meant to characterize analytic philosophy, then why has analytic philosophy been thought to start with Russell and Moore?

The answer is that it is not decompositional analysis on its own that characterizes analytic philosophy, even during its logical atomist phase. In my view, the single most significant event in the development of analytic philosophy was not Russell's and Moore's rebellion against idealism, but the appearance in 1905 of Russell's theory of descriptions. Frank Ramsey rightly described this theory as a 'paradigm of philosophy' (1931, p. 263), a view that was endorsed by Moore (1959, p. 151). What is crucial about the theory of descriptions is that it introduced a quite different conception of analysis, which might be characterized as a *transformative* or *explicatory* conception. Fundamental to the theory is the *rephrasing* of the sentence to be analyzed, a sentence of the form 'The *F* is *G*', where 'The *F*' represents the definite description, into a sentence of a quite different form. To take Russell's classic example, 'The present King of France is bald' is analyzed as 'There is one and only one King of France, and whatever is King of France is bald'. There is nothing decompositional about this type of analysis. 'The present King of France is bald' is not being analyzed into 'The present King of France' and 'is bald', for example. The definite description is 'analyzed away': no such phrase appears in the analyzed sentence.

Again, though, the idea of transformative analysis itself was not new. It can be found in medieval logic, for example, and arguably goes back to Aristotle's logic and ancient Greek geometry (which is the original source of talk of 'analysis'). Indeed, in some sense, transformation is involved in all types of analysis.[3] A good example of the idea in its pure form can be found in the conception of paraphrasis articulated by Jeremy Bentham (1748-1832). In his *Essay on Logic* (published posthumously, in 1843), Bentham wrote: "By the word paraphrasis may be designated that sort of exposition which may be afforded by transmuting into a proposition, having for its subject some real entity, a proposition which has not for its subject any other than a fictitious entity" (1843, p. 246). Bentham applied the method in 'analyzing away' talk of 'obligations' (cf. 1843, p. 247), and the similarities between Bentham's method and Russell's theory of descriptions

have been discussed, most notably, by John Wisdom (1904-93) in a book devoted to just this relationship published in 1931.[4]

In its distinctive modern form, however, transformative analysis originated with Frege, which is why Frege has also come to be seen as one of the founders of analytic philosophy. The central project of Frege's life was to demonstrate that arithmetic is reducible to logic, and in pursuing this he both invented modern quantificational logic, which made the project feasible, and provided analyses of number statements. On his account, a number statement such as 'Jupiter has four moons' is analyzed as 'The concept *moon of Jupiter* has four instances' (cf. 1884, §§ 46, 54).[5] That is, it is viewed not as predicating of Jupiter the property of having four moons, as a simple decompositional analysis might suggest, but as predicating of the (first-level) concept *moon of Jupiter* the (second-level) property *has four instances*, which can be logically defined in Frege's theory. To make clear that number statements can be logically defined, in other words, Frege had to transform the statements to show what was 'really' involved.

What distinguishes Frege's and Russell's use of transformative analysis from earlier uses? Here what is crucial is the role played by quantificational logic, which Frege invented and which Russell further developed and applied. Quantificational logic offered a far more powerful means of representing propositions and inferences than had hitherto been available, but only worked by assuming that ordinary language sentences could indeed be radically transformed in formalizing them. The radical nature of these transformations and the use to which they were put in Frege's and Russell's logicist projects inevitably opened up semantic, epistemological and metaphysical questions. What is the relationship between ordinary language and formal logic? What governs the 'correctness' of a logical formalization? Clearly, not everything is preserved in such transformations, so what *is* preserved and what can be allowed to vary? If we make use of notions such as 'content', 'sense', 'meaning', 'denotation' or 'reference' in justifying the analyses, then how are these notions to be explained and what are their relationships? To what extent are our analyses answerable to the world itself? Can we say anything a priori about what the world must be like, and if so what? What is the relationship between language and thought? How do they represent or engage with the world? These and many other such questions have provided the dynamic of the analytic movement ever since the work of Frege and Russell.

Of course, many of these questions have been asked before in different forms, but what made such questions pressing was the need to justify the new logic, and what arose, as a result, was far greater self-consciousness about our use of language and its potential for leading us astray. This greater self-consciousness has prompted talk of a 'linguistic turn' having occurred in twentieth-century philosophy, a turn that was arguably first made in Wittgenstein's *Tractatus*, drawing on Frege's and Russell's ideas. But underlying this linguistic turn was the analytic turn instigated by Frege's and Russell's use of transformative analysis in developing and applying quantificational logic. It is the philosophical questions that this raised that have given shape to the analytic tradition.

But where does this leave decompositional analysis with which analytic philosophy seemed to begin? The relationship between decompositional and transformative analysis is one of the key issues addressed in this volume - in particular, in Part One. But the short answer, as far as Russell is concerned (brought out in the papers by Griffin and Hylton), is that transformative analysis was introduced to *reinforce* his appeal to decompositional analysis, which he continued to assume was required at the ultimate level of analysis. For the aim of transformation was to reveal the 'real' logical form of the proposition to be analyzed, the constituents of the fully analyzed sentence being assumed to correspond to, and be structured in exactly the same way as, the ultimate simple constituents of the reality represented. As far as Frege is concerned, the issue is more complicated, since Frege did not share Russell's fundamental assumption that every propositional content can be uniquely analyzed into ultimate simple constituents. For Frege, function-argument analysis (as utilized in transformative logical analysis) played a far greater overt role than whole-part (decompositional) analysis, although (arguably) he still made tacit appeal to the latter in the ontological conclusions he drew. (For discussion of the differences between Frege's and Russell's conceptions of analysis, see the papers by Reck, Levine and Beaney.)

Although Russell does not seem to have recognized the distinction between transformative and decompositional analysis, at least explicitly, the distinction (or something like it) did come to be drawn by the members of the so-called 'Cambridge School of Analysis' in the late 1920s and early 1930s - in the second phase of analytic philosophy (to endorse the division suggested by Hacker in his paper; see p. [2] below). In their terminology, there was a difference between 'logical' or 'same-level' analysis, which simply transformed one sentence into another, and 'philosophical' or 'metaphysical' or 'reductive' or 'directional' or 'new-level' analysis, which revealed the underlying ontological commitments. (The distinction can also be seen as implicit in Wittgenstein's *Tractatus*, as the papers by Hanna and Phillips indicate.) There was a great deal of debate in this period about the nature and role of analysis, the main result of which was growing criticism of the reductive conception.[6] But with the distinction in place, it was possible to accept this criticism without rejecting analysis altogether. Same-level analysis could be endorsed without metaphysical reductionism, and this became the hallmark of the phase (or phases) of analytic philosophy that followed.

The move away from reductive conceptions of analysis and the development of alternative conceptions can be found, for example, in the work of the Vienna Circle during the 1920s and 1930s (in the third phase of analytic philosophy distinguished by Hacker). The most significant figure in this regard was Rudolf Carnap (1891-1970), whose first major work, *Der logische Aufbau der Welt*, was published in 1928. The *Aufbau* opens with endorsement of what Russell called in 1914 'the supreme maxim in scientific philosophizing': "Wherever possible, logical constructions are to be substituted for inferred entities" (1917, p. 115). This has often been interpreted as recommending a programme of ontological eliminativism, as

suggested by the theory of descriptions, but Carnap interprets it epistemologically, as permitting what he calls 'rational reconstruction'. (Russell's own understanding of logical construction is discussed in the papers by Hylton and Linsky.) As Carnap characterizes it in the preface to the second edition of the *Aufbau*, rational reconstruction is "the searching out of new definitions for old concepts", where the new definitions "should be superior to the old in clarity and exactness, and, above all, should fit into a systematic structure of concepts" (1961, p. v). As he goes on to note, such clarification of concepts is what he later called 'explication'; and the idea of explication is one of the themes explored in this volume, beginning with the paper by Reck.[7]

Carnap's programme of explication provides one example of the transition to less reductive conceptions of analysis. But undoubtedly the most striking and important example is Wittgenstein's later work, in which he explicitly repudiates his earlier logical atomism, and develops a new view of philosophy as conceptual clarification. Wittgenstein's early and later thought is discussed in three of the papers in Part Two of this volume, by Hacker, Hanna and Phillips. Wittgenstein's ideas were enormously influential, not only in Cambridge, among his various pupils and colleagues, but also in Oxford in the two decades or so after the Second World War (in the fourth phase of analytic philosophy distinguished by Hacker), when related methodologies were used by Gilbert Ryle (1900-76), J. L. Austin (1911-60) and Peter Strawson (1919-2006), to name three of the most dominant figures. Strawson has talked of 'connective' analysis replacing reductive analysis (1992, ch. 1), and this is an apt way to encapsulate the transition. But connective analysis was not only a feature of British philosophy. As Baldwin shows in his paper, a connective conception can also be found prior to the Second World War in the work of C. I. Lewis (1883-1964), the most important American analytic philosopher of the period. The development of connective forms of analysis provides the main theme of the papers in Part Two.

I suggested above that the single most significant event in the development of analytic philosophy was the appearance of the theory of descriptions in 1905. But 1905 also witnessed the introduction by Edmund Husserl (1859-1938) of the idea of 'phenomenological reduction',[8] which was a key moment - perhaps ***the*** key moment - in the development of phenomenology. The analytic and phenomenological traditions have often been seen as rivals in the history of twentieth-century philosophy, but in recent years, the common origins of the two traditions and their philosophical connections have been stressed.[9] One important influence on Husserl, for example, was Bernard Bolzano (1781-1848), whose work anticipates many ideas in later analytic philosophy. Bolzano's conception of analysis is discussed by Lapointe in the first paper of Part Three.

Just as much as Frege and Russell, Husserl's philosophy grew out of an interest in the foundations of mathematics, and he became deeply concerned to combat psychologism. From his earliest work onwards, his aim was to uncover the sources of our meaning-constituting acts, initially in mathematics and logic, later more generally. (Husserl's early development

is explained in the paper by Moran.) Indeed, we can also see an analytic turn as having taken place in giving rise to phenomenology. As in the case of analytic philosophy, this had many aspects. In my own work on conceptions of analysis in the history of philosophy, I have distinguished three main modes of analysis - the regressive, the decompositional and the transformative (see §1 of my paper below). The decompositional and transformative modes have already been introduced. But the regressive mode, understood as the process of identifying the principles, premises, causes, etc., by means of which something can be derived or explained, was arguably dominant in conceptions of analysis up until the early modern period, and regressive conceptions have been prevalent ever since (even if overshadowed by decompositional conceptions).[10] Frege's and Russell's concern to reveal the logical source of our knowledge of arithmetic, encapsulated in logical laws and definitions, can be seen as illustrating the conception, and Russell alluded to the conception himself in the title of a paper written in 1907, 'The Regressive Method of Discovering the Premises of Mathematics'. The regressive conception is also a feature of Husserl's methodology. We can see it reflected in Husserl's remark in the *Crisis* that he uses the key word 'transcendental' "*in the broadest sense* for the original motif … which through Descartes confers meaning on all modern philosophies … the motif of inquiring back into the ultimate source of all the formations of knowledge" (1936, §26).

As Husserl's use of the term 'transcendental' suggests, though, there is a Kantian dimension to Husserl's project, and the remark itself indicates a Cartesian motivation as well. So what was new in Husserl's analytic turn? What Husserl himself identified as crucial was his 'discovery' in 1905 of the method of reduction (later elaborated into a number of procedures), by which all our various everyday, psychological and scientific assumptions are 'bracketed' in order to focus on the underlying concepts and structures of our cognitive acts.[11] Phenomenology became the task of "clarifying the essence of cognition and of being an object of cognition", as he put it in *The Idea of Phenomenology* (1964, p. 18).

It is not just the coincidence of date that prompts the comparison with Russell here. For, as I suggest in my own paper, just as Russell was concerned to identify the indefinables of philosophical logic, as he described it in the *Principles* (quoted on p. [15] below), to be apprehended by 'acquaintance', so too Husserl was concerned to isolate through phenomenological reduction the 'essences' that underlie our logical thinking, to be apprehended by 'essential intuition' ('*Wesenserschauung*'). Furthermore, as Haaparanta brings out in her paper, there are also elements of 'transformation' in phenomenological reduction, which raise philosophical issues, and the paradox of analysis, in particular, which equally affect the kind of transformative analysis exemplified by the theory of descriptions.

Insofar as grasping 'essences' amounts to "fixing concepts in intuition", as Moran characterizes phenomenological analysis (see p. [19] below), Husserl's project can also be seen as one of conceptual clarification. This is discussed, in complementary ways, by Moran and Thomasson in their

papers. Moran elucidates the ‘transcendental subjective’ aspects of Husserl’s methodology, while Thomasson compares phenomenology with ordinary language philosophy. Appreciating the similarities and differences between phenomenological analysis and forms of analysis in analytic philosophy sheds much light on both. Certainly, comparison demonstrates just how subtle and intricate are the relationships between the various conceptions of analysis that can be found in the two traditions, conceptions that themselves have roots in earlier conceptions. The nature of phenomenological analysis and its relationship to other conceptions of analysis form the central theme of the papers in Part Three.

Even in a book devoted to the topic of analysis, with fourteen contributors writing from a variety of perspectives, it is not possible to do justice to the full range of conceptions of analysis in twentieth-century philosophy. This volume focuses on certain key figures in early analytic philosophy and phenomenology, in the period prior to the Second World War. But both earlier and later conceptions are also discussed, since these help place the developments in this period in context. In the rest of this introduction I will say a little more about each of the papers in turn, highlighting their significance in the overall picture that I have all too briefly sketched in these first few pages. I draw some conclusions in the final section.

1- Frege and Russell: Decompositional and Transformative Analysis

The papers in Part One explore the work of Frege and Russell, the two main instigators of the analytic turn that gave rise to analytic philosophy. As indicated above, both Frege and Russell came to philosophy through concern with the foundations of mathematics, and both sought to demonstrate the logicist thesis that arithmetic (and geometry as well, in the case of Russell) could be reduced to logic by offering transformative analyses utilizing the new quantificational logic. It was in their philosophical attempts to justify their logicist projects that analytic philosophy was born.

In 'Frege-Russell Numbers: Analysis or Explication?', Erich Reck takes as his starting-point the logicist definition of the natural numbers as equivalence classes of equinumerous classes which both Frege and Russell gave, and considers the status of this definition, focusing primarily on Frege's views. Was it intended as an 'analysis', in the sense of revealing what the natural numbers 'really' are, or as an 'explication', in the sense of offering a reconstruction that does essentially the same job but in a more powerful and rigorous theoretical system? The Platonism that many have attributed to Frege would seem to suggest the first, while the second is compatible with a more conventionalist reading that brings Frege closer to Russell and Carnap. Reck does not attempt the difficult task of deciding the issue on textual grounds, but he does elucidate the conceptions of analysis involved in asking the question and discuss the constraints on such definitions that might narrow down the possibilities.

As far as Frege's Platonism is concerned, Reck argues that this should not be interpreted as invoking a 'Platonic heaven' of abstract objects such as numbers, which we apprehend by some quasi-perceptual 'intuition'. The most charitable and sophisticated reading, he suggests, is that developed by Tyler Burge,[12] according to which getting at 'the facts of the matter' is taken to involve reasoning and theory construction rather than (quasi-)empiricist observation. Nevertheless, even this sophisticated reading seems to conflict with a more conventionalist reading, and as Reck notes, there are certainly passages where Frege offers something very close to Carnap's notion of explication (in lectures that Carnap actually attended).[13]

One way of approaching the issue is by comparing the Frege-Russell definition with alternative definitions such as those subsequently provided by John von Neumann and, more recently, by Crispin Wright and Bob Hale. Taking these three cases, how do we decide whether to identify the natural numbers with the *Frege-Russell numbers*, the *von Neumann numbers* or the *Wright-Hale numbers*, as Reck calls them? Like the Frege-Russell numbers, the von Neumann numbers are classes (set-theoretic objects), which satisfy the Dedekind-Peano axioms, but they arguably do not do justice to the role of numbers in 'bringing together' equinumerous collections. The Wright-Hale numbers, on the other hand, seem to do justice to the application of numbers, but do they really count as logical objects? Would Frege have been happy with Wright's and Hale's 'neo-logicism'?

Clearly, there are different constraints in different theoretical contexts, and the question of what the numbers 'really' are can only be answered in a particular conceptual framework. As Reck suggests, this might help us in reconciling the Platonist and conventionalist strands in Frege's thought, even if Frege himself may not have seen it in this way. Indeed, for any interpretation of Frege's thought that might be offered, we might well be tempted to ask an analogous question. Does the interpretation offered count as an 'analysis' or an 'explication'? Are there 'facts of the matter' as to what Frege really meant? The question Reck addresses in his paper clearly has implications beyond the specific case of the natural numbers.

Frege's and Russell's logicist definition of the natural numbers as equivalence classes of equinumerous classes is also the starting-point of James Levine's paper, 'Analysis and Abstraction Principles in Russell and Frege'. Although they offered the same definition, however, Levine argues that they used that definition in quite different ways (providing a further illustration of the Carnapian message of Reck's paper, we might add). For Frege, it played a role in his claim that numbers are 'self-subsistent objects', whereas for Russell, it was taken as showing that numbers can be dispensed with in giving an inventory of the world. Underlying these two different philosophical approaches were two different conceptions of analysis and propositional contents. Central to Russell's philosophy from the time of his rejection of idealism, Levine argues, was the principle that every propositional content can be uniquely analyzed into ultimate simple constituents, a claim that Frege did not endorse. This meant that, for Russell, every proposition had a privileged representation (even if no one had yet been able to give it), which mirrored its content at the ultimate level of analysis. If two sentences of different forms could be used to assert the same propositional content, therefore, then they could not both be privileged representations. Frege, on the other hand, insisted throughout his life that one and the same content ('thought', in his later terminology) could be analyzed in indefinitely many ways, without assuming that there was some one way that was uniquely privileged.

Consider, then, the case of the Cantor-Hume principle,[14] asserting the equivalence between (Na) and (Nb):[15]

(Na) The concept *F* is equinumerous to (i.e., can be correlated one-one with) the concept *G*.

(Nb) The number of *F*s is equal to the number of *G*s.

On Russell's view, if (Na) and (Nb) have the same propositional content, then at most only one of them can offer a privileged representation of that content, since they are of different forms. So their equivalence suggests that talk of numbers can be 'reduced' to talk of the one-one correlation of concepts, so that we do need to suppose the existence of numbers in addition to that of concepts. For Frege, on the other hand, the possibility of contextually defining numbers in this way does not imply that numbers are not objects. On the contrary, the fact that number statements can be true and that constituent number terms such as 'the number of *F*s' are proper names is enough to show that numbers *are* objects. The issue is how we can apprehend such objects, given (as Frege himself stressed) that they are not

actual objects, i.e., spatio-temporal objects that have causal effects. It was here that he appealed to the equivalence between (Na) and (Nb). According to Frege, we apprehend numbers by understanding the sense of sentences in which number terms appear, an understanding that is grounded (and hence shown to have a logical source) by our grasp of sentences such as (Na) together with our recognition of the equivalence captured in the Cantor-Hume Principle.[16]

What we have in the case of the Cantor-Hume Principle is what is often called an 'abstraction principle', and Frege's and Russell's different conceptions of analysis clearly lead to different views of the use of such principles. In fact, it is significant in this respect that Frege himself never called it an 'abstraction principle', a phrase which itself suggests that one of the two sentences involved is on a different and 'higher' (i.e., more abstract) level to the other - numbers being 'abstracted' from the relation of one-one correlation obtaining between concepts. Indeed, from Russell's diametrically opposed perspective, the use of the phrase is also misleading, since it seems to grant that numbers are objects, just 'higher' or more abstract objects. As Levine notes (p. [16] below), Russell at one point remarks that the principle of abstraction should really be called 'the principle which dispenses with abstraction', since it "clears away incredible accumulations of metaphysical lumber" (1914, p. 51). In Russell's case, the reductionism made possible by abstraction principles takes the form of eliminativism - 'analyzing away' the supposed abstract objects. Not only the use of abstraction principles but also the very name they are given, then, reflects the underlying conceptions of analysis.

What led Russell to this eliminativist view of abstraction principles? He may have shared Frege's concern to demonstrate logicism, but he adopted a diametrically opposed approach to the use of abstraction principles. As Levine shows, at the root of this disagreement lies their different conceptions of analysis, and in particular, their different attitudes to the principle that every propositional content can be uniquely analyzed into ultimate simple constituents, which Russell endorsed but Frege did not. This principle was adopted by Russell in his initial rejection of idealism. But adopting this principle does not in itself determine which of the two sentences involved in an abstraction principle is to be seen as the more fundamental (as the more privileged representation, in Levine's terminology), nor whether eliminativism is to be preferred to a more moderate reductionism. Why should (Na) be seen as more fundamental than (Nb), for example, and why, if we do this, should we think of numbers being 'analyzed away' rather than just being shown to be 'higher' objects?

Levine identifies the source of Russell's concern with abstraction principles in his interest in theories of serial order, which arose in his engagement with Hegelian idealism. Take the case of events, considered as ordered by the temporal relations of *before*, *after* and *simultaneous with*. On an absolute theory, to say that two events are simultaneous with one another is to say that they both occur at one time, moments of time being treated as just as real as events, and the relation of *occurring at* being treated as just as basic as the ordering relations. On a relative theory, on the other hand,

events and the ordering relations are taken as basic, and moments of time are then defined in terms of these. (There is no absolute framework of temporal moments in which events are located.) Immediately after his rejection of idealism, Russell adopted absolute theories of order, but he soon came to endorse relative theories. In the case of number, for example, he moved from regarding numbers as just as real as (and distinct from) classes to treating them as definable in terms of (and hence reducible to) classes.

What led Russell to endorse relative theories of order? In his paper Levine is more concerned with the differences between Frege and Russell than with the details of the evolution of Russell's ideas, but he does note that the change coincides with Russell's acceptance of logicism in 1901/1902.[17] Russell was able to endorse the logicist definition of numbers as classes without subscribing to Frege's realism, however, because of his different conception of analysis. This is Levine's main point, and it illustrates not only the dependence of metaphysical views on conceptions of analysis but also, in the case of Russell, the significance of the period between 1900 and 1905. This period has long been recognised as crucial in the development of Russell's thought, and much light has been shed on it by the authors of the next two papers, Nicholas Griffin and Peter Hylton.[18] Griffin looks in more detail at Russell's early conception of analysis, and Hylton discusses the transformative conception of analysis that was introduced by the theory of descriptions in 1905.

In 'Some Remarks on Russell's Early Decompositional Style of Analysis', Griffin shows how fundamental Russell's early conception of analysis was in his thinking after his break with idealism, a conception that was essentially decompositional, that is, that treated analysis as a process of identifying the constituents of something. Russell initially conceded to idealism that a complete analysis was only possible where the complexes to be analysed were mere collections rather than unities, unities involving relations that could not be separated out. But he nevertheless rejected the key doctrine of the British idealists that all relations are internal. What exactly did this doctrine mean, however, and why did Russell reject it? In answering these questions, Griffin focuses on the debate that Russell had with Harold Joachim (1868-1938) in 1905-7, a debate in which the question of the nature of relations was central. Russell glossed what he called the 'axiom of internal relations' as the view that all relations are grounded in the natures of their terms. But according to Russell, 'the nature of a term' could mean either 'all the propositions that are true of the thing' or 'the adequate analysis of the thing', and he accused the idealists (Hegelians) of failing to recognise this distinction, a failure that follows, he claimed, from their principle that every proposition attributes a predicate to a subject (cf. pp. [11-13] below).

Understanding this principle to be restricted to the case of atomic propositions, however, Griffin points out that Russell's claim is only correct on the assumption that *all* the properties of a thing are included in an adequate analysis of it. For only then is it true that if every (atomic) proposition attributes a property to a thing, then the set of all (atomic) propositions that are true of a thing is the same as the set of propositions that

give its analysis. But such an assumption, Griffin goes on to argue, makes all such propositions come out as ‘analytic’ - at least, on the traditional definition of an ‘analytic’ proposition as one in which the predicate is contained in the subject - and this cannot have been Russell’s view. Indeed, Russell had himself criticized this view in his book on Leibniz. So how can he have maintained the assumption? Griffin’s answer is that Russell did not, in fact, accept that all - or even most - propositions that are apparently of subject-predicate form are actually of that form; many should be construed instead as relational. Russell rejected, in other words, what he saw as the Hegelian principle that every proposition attributes a predicate to a subject.

As Griffin notes, however, such a defence of Russell’s early decompositional conception of analysis is not completely successful, for it does not solve the problem of simple terms (things). By definition, simple terms have no parts, and so cannot be analysed; in which case, it would seem, they cannot have properties. Griffin states the options for Russell here, but does not attempt to resolve the problem. He concludes his paper by highlighting the importance that the question of relational propositions had in the development of Russell’s early philosophy and the extent to which Russell’s break with Hegelianism was gradual: it took him several years to think through the implications of his rejection of the doctrine of internal relations in the context of his decompositional conception of analysis. That conception was not new; what was new was the use he made of it.

At the core of Griffin’s account of the defensibility of Russell’s early decompositional conception of analysis is the claim that many apparently subject-predicate propositions are implicitly relational. This is not a claim that Russell would have made at the beginning of the 1900s. In *The Principles of Mathematics*, for example, he wrote: “On the whole, grammar seems to me to bring us much nearer to a correct logic than the current opinions of philosophers; and in what follows, grammar, though not our master, will yet be taken as our guide” (1903, p. 42). Russell’s debate with Joachim, however, occurs around the time of ‘On Denoting’, when Russell was developing the theory of descriptions, and the claim is certainly characteristic of his views then. Central to the theory of descriptions is the idea that a sentence may need to be transformed - and indeed, radically transformed - to adequately represent the relevant thought or proposition. This idea of transformation is discussed by Peter Hylton in ‘“On Denoting” and the Idea of a Logically Perfect Language’.

Hylton begins by clarifying Russell’s idea of a logically perfect language, a language which mirrors the structure of both the world and the thoughts that represent that world, and in which each ultimate element (simple object) of the world is denoted by one and only one word. Given that our ordinary language is not such a language, associated with the idea is a certain conception of analysis, the aim of which is to transform our ordinary sentences into sentences of the logically perfect language. But what constraints are there on such transformations? Hylton identifies what he calls Russell’s ‘Principle of Acquaintance’ as the key principle, which Russell himself formulates at the end of ‘On Denoting’ as follows: “in every proposition that we can apprehend … all the constituents are really entities

with which we have immediate acquaintance." Although this principle was not new in 1905, Hylton argues, it did not impose any significant constraint on analysis up to that point. In the immediate aftermath of his break with idealism, Russell allowed acquaintance with all sorts of entities; and during the period in which he held his theory of denoting concepts (from 1900/1901 to early 1905), any constraint that such a principle might have imposed was negated, since that theory allowed propositions to have constituents, namely, denoting concepts, that could denote things with which we were not acquainted. It was only when that theory was rejected in favour of the theory of descriptions that the principle finally came to impose a real constraint on analysis.

As far as Russell was concerned, what was crucial about the theory of descriptions was that it enabled him to maintain, in an unqualified form, the view that he had first adopted in rejecting idealism - that a proposition quite literally *contains* the objects which it is about. That view had been restricted by the theory of denoting concepts, which had provided a way of dealing with what were accepted as counterexamples. But that theory had also left mysterious the relation of denoting itself - the relation that was taken to obtain between denoting concepts and the things denoted. Russell's theory of descriptions dispensed with this relation (except, perhaps, in the one case of the variable), but its development came at a cost: the cost of admitting that ordinary sentences need to be radically transformed to yield their 'real' logical form, a form that can only be fully revealed in the logically perfect language. In other words, the theory of descriptions allowed Russell to retain his early decompositional conception of analysis, in all its original simplicity, but only by supplementing it with a *different* conception of analysis - the idea of analysis as transformation.

Hylton goes on to consider the further development of this idea in Russell's later conception of a logical construction and in the work of W. V. O. Quine (1908-2000). In the case of the former (which I will just say something about here), this was reflected in Russell's 'supreme maxim in scientific philosophizing': "Wherever possible, logical constructions are to be substituted for inferred entities" (1917, p. 115; quoted on p. [6] above, in discussing Carnap's *Aufbau*). The role that the Principle of Acquaintance plays in Russell's philosophy might seem to make the need for inferred entities particularly acute. For if we are (apparently) able to talk about a lot of things with which we are not acquainted, then must we not *infer* their existence to explain how our talk can be *about* such things? Russell denies, however, that such talk is indeed about such things (even if they do exist), and has no way of making sense of entities that are different in kind from those with which we are acquainted. Instead, he suggests, we have to construct *analogues* of those entities out of the entities with which we are acquainted (i.e., out of our sense data). But this only reinforces Hylton's central point - that "Russell is committed to the possibility, in principle, of an extremely far-reaching programme of philosophical analysis" (p. [19] below]. Virtually nothing is what it seems, on Russell's philosophy after 1905, and it requires extensive analysis to show what the sentences we use are really about.

Russell's conception of logical construction forms the topic of the final paper in Part One, 'Logical Analysis and Logical Construction', in which Bernard Linsky sheds light on the source of this conception in Russell's philosophy of mathematics, and argues against two influential interpretations of it. Linsky takes as his starting-point Russell's famous remark in *Introduction to Mathematical Philosophy*: "The method of "postulating" what we want has many advantages; they are the same as the advantages of theft over honest toil. Let us leave them to others and proceed with our honest toil." (1919, p. 71) Russell had in mind here the 'postulation' by Richard Dedekind (1831-1916) of the irrational numbers as limits of a series of ratios, whereas Russell saw himself as actually 'constructing' them by defining them as classes. The Dedekind-Peano axioms in the theory of the natural numbers also count as 'postulates' which in Russell's (and Frege's) logicist project are derived as (supposed) theorems of logic. The logicist definitions of the numbers thus provide the model of logical construction.

In his essay 'Logical Atomism', Russell offers a further formulation of the maxim quoted above: "Wherever possible, substitute constructions out of known entities for inference to unknown entities". He then immediately suggests that an instance of this maxim is what he has called 'the principle of abstraction' or 'the principle which dispenses with abstraction' (1924, p. 326). As we have seen in considering Levine's paper, this is the principle that Russell saw as governing his treatment of abstract objects such as numbers. So the message would seem to be that the appeal to abstract objects as inferred entities is to be replaced by the logical construction of analogues that have the same (or at least analogous) formal properties. This message lies at the heart of Linsky's criticisms of two particular interpretations of Russellian logical construction. On the first, developed during the early 1930s in the work of the Cambridge School of Analysis, logical constructions provide metaphysical reductions, showing how entities of one kind (such as numbers) can be 'reduced' to, entities of another kind (such as classes). On the second, based on the more recent work of William Demopoulos and Michael Friedman, logical constructions exhibit the mathematical structures that can be taken as applicable to the empirical world (with the help of appropriate representation theorems). I will focus here on the first interpretation, since (as indicated above) the Cambridge School of Analysis itself forms part of the early history of analytic philosophy.

A paradigm example of logical construction, on the first interpretation, is the 'reduction' of committees to their members: a committee is nothing over and above the individual people that make up that committee and their relevant activities. The idea was extended to the case of material objects (which Russell had himself considered in *The Analysis of Matter* of 1927): tables and chairs, for example, were seen as logical constructions out of sense data. On such an interpretation, Russell's position comes out as similar to traditional phenomenalism. But on Linsky's account, Russell is not claiming that material objects 'really are' bundles of sense data. Rather, he is attempting to define entities that have the same (or analogous) formal

properties as material objects, by means of which all the fundamental claims about the material world, such as that no two material objects can be in the same place at the same time, can be proved as theorems.

On Linsky's view, then, logical construction is not a form of reductive analysis but exemplifies what Carnap came to call 'explication'; and it is significant in this respect that Carnap did indeed have Russellian logical construction in mind here (cf. pp. [6-7] above). Linsky is reluctant to call it 'analysis' at all, or at least 'analysis proper', which he characterizes as "the process of finding those ultimate constituents of reality out of which the world in so far as we directly know it through acquaintance is constructed" (pp. [9-10] below). But this is just decompositional analysis, and there are many other uses of the term 'analysis', not least in Russell's own writings, as Linsky recognizes. When Russell talks of 'the analysis of matter', for example, he is indeed referring to logical construction and not just decompositional analysis. The important point, though, is that the conceptions (whatever they are called) are distinguished and their relationships clarified; and Linsky is right to suggest that the interpretation of logical construction within the Cambridge School of Analysis was distorted by the influence of Wittgenstein's *Tractatus*. Russell did not take himself to be analyzing ordinary language, and saw no methodological difficulty in offering 'analogues' or 'substitutes' or 'explications' of our ordinary notions. For him, the type of analysis exemplified in logical construction did not involve reducing entities of one kind to entities of another kind, but rather, replacing postulated entities by constructed entities that do analogous work within the relevant theoretical system.

Although I have suggested that the appearance of the theory of descriptions in 1905 is the single most important event in the development of analytic philosophy, then, the analytic turn itself was a far more complex event. Even in the particular case of Russell's philosophy, there were several key stages. Russell's and Moore's rebellion against idealism may have accorded pride of place to decompositional analysis, but this became supplemented by transformative analysis, made possible by the quantificational logic that Frege invented and utilized in offering his own analyses. But Russell's use of transformative analysis was different from Frege's, and has itself given rise to different interpretations and developments. All this is part of the complex methodological inheritance that continues to shape analytic philosophy today.

2- Wittgenstein and Other Philosophers: Connective and Explicatory Analysis

As mentioned above, the first phase of analytic philosophy culminated in Wittgenstein's *Tractatus*, and in the late 1920s and early 1930s the conception (or conceptions) of analysis involved in the programme of logical atomism were subjected to increasing critique, with the result that new conceptions of analysis emerged, which might be broadly characterized as connective or explicatory rather than reductive conceptions. This development is the main theme of the papers in Part Two.

In the paper that opens Part Two, 'Analytic Philosophy: Beyond the Linguistic Turn and Back Again', Peter Hacker offers an overview of the history of analytic philosophy and the conceptions of analysis it involves. In the first section, he divides analytic philosophy into four phases. The first is the one with which we have mainly been concerned so far, inaugurated by Russell's and Moore's rebellion against idealism and culminating in Wittgenstein's *Tractatus* (though I would wish to accord a greater role to Frege in the story than Hacker acknowledges here); the second involved the Cambridge School of Analysis active in the 1920s and early 1930s; the third was the heyday of the Vienna Circle in the 1930s; and the fourth combined post-war Oxford philosophy, led by Ryle and Austin, with the later philosophy of Wittgenstein and his pupils. Whether we are now witnessing a fifth phase or the death of analytic philosophy Hacker leaves as an open question.

In the second section, he notes the conceptions of analysis involved in each phase, from the decompositional conception of Russell and Moore, through Russell's later reductive conception and the differing views of logical analysis of the early Wittgenstein and Carnap, to the connective conception of the later Wittgenstein, Ryle and Strawson. Although he denies that analytic philosophy can be defined by reference to any methods of analysis, he nevertheless suggests that it can be broadly characterized by its concern, first, with formal logic, and second, with language and its uses. But this characterization permits widespread disagreement within the analytic tradition about the relationship between formal logic and natural language. Indeed, Hacker suggests that there has been polarization on the issue throughout its history.

In the final section of his paper, Hacker takes issue with Timothy Williamson's recent suggestion that analytic philosophy has now taken a 'representational turn', repudiating the earlier 'linguistic turn'. Hacker clarifies what was involved in the linguistic turn and defends its essential achievement, which was to make the meticulous examination of language a central method of philosophy. He criticizes Williamson's claim that the goal of philosophy is the analysis of representation, and indicates why he thinks that the revival of metaphysics that Williamson associates with the representational turn is a retrograde step. The aim of philosophy, Hacker concludes, "is the clarification of the forms of sense that, in one way or another, are conceptually puzzling - for they are legion" (p. [19] below). Although Hacker may be cautious in characterizing the state of analytic philosophy today, it seems to me that, whether or not there is now a new

strand that has taken a representational turn, analytic philosophy is alive and well in the work of Hacker and all those for whom connective analysis continues to play a central role.

In 'Kant, Wittgenstein, and the Fate of Analysis', Robert Hanna traces what he sees as the main development in conceptions of analysis from Kant to the later Wittgenstein via the *Tractatus*. He begins by outlining what he calls Kant's 'conceptual-decompositional' theory of analysis, though stressing its subservience to Kant's transcendental idealist project. He then suggests that in rejecting both Kantian and Hegelian idealism, early analytic philosophy replaced this theory by the 'logical-decompositional' theory, which found its definitive statement in the logical atomism of Wittgenstein's *Tractatus*. As Hanna explains the Tractarian conception, logical analysis is concerned both to offer a critique of language and to reveal the deep structure of our language and thought; and it is in the latter respect that it differs from Kantian analysis. In Kantian jargon, Hanna remarks, "Tractarian logical-decompositional analysis is ***noumenal*** analysis of ***things-in-themselves***", aimed at establishing contact with the simple objects that make up the substance of the world (p. [12] below).

Hanna goes on to discuss Wittgenstein's later conception of analysis, which he sees as dropping the noumenalism. More specifically, Hanna argues, it emerged from Wittgenstein's rejection of his earlier direct-referentialist semantics and picture theory of meaning, and from his elaboration of the idea that logic is 'grammar'. Hanna calls Wittgenstein's later conception 'dialectical conceptual analysis', which "(a) displays and diagnoses the dialectical structure of philosophical problems, (b) describes, unpacks, compares, and contrasts the concepts implicit in our various ordinary uses of language and states truisms about them, and then (c) stops" (p. [18] below). This brings us back to Kant, Hanna suggests, the main difference being the explicit recognition on Wittgenstein's part of the role that linguistic behaviour plays in our cognitive activities. Philosophical analysis, Hanna concludes, "is ultimately rational anthropology in a wide sense that includes the theory of language: ***the logically-guided universal normative theory of human rationality***" (p. [21] below).

According to Hanna, Tractarian logical analysis had two main aims - to offer a critique of language and to reveal the deep structure of our language and thought. In 'Complete Analysis and Clarificatory Analysis in Wittgenstein's *Tractatus*', Dawn Phillips looks at the relationship between these two aims in more detail, although she prefers to talk of two conceptions of analysis being involved here. She begins by explaining why a critique of language is necessary - because of our misunderstanding of the logic of our language, reflected in our failing to recognize how the linguistic signs we use symbolize. She argues, however, that there is a problem in Wittgenstein's conception of how to correct this misunderstanding. For "in order to recognize the symbol in the sign", Wittgenstein writes, "we must consider the significant use [*den sinnvollen Gebrauch*]" (3.326), that is, we must consider when the sign is used in accord with the rules of logical syntax. But if we can do this, then it would seem that we must already recognize the symbol in the sign, i.e., already understand the logic of our

language. What we have here is a version of the paradox of analysis, and to solve this problem, Phillips suggests, we need to distinguish between complete analysis and clarificatory analysis. The complete analysis of a proposition reveals its ultimate logical form (exhibiting it as a truth-function of elementary propositions); clarificatory analysis merely removes a misunderstanding, and does not require full elucidation of the logical syntax. It is clarificatory analysis that Wittgenstein has in mind in talking of the 'correct method' in philosophy (cf. 6.53), Phillips argues, and which avoids the paradox of analysis.

Of course, on Wittgenstein's early view, the possibility of complete analysis *underpins* clarificatory analysis. But Phillips makes the further point that, even if it were possible, the complete analysis of a proposition can only in fact be undertaken *after* clarificatory analysis, clearing away confusions that may surround the use of the proposition. And the importance of clarificatory analysis is reinforced when we consider the transition to Wittgenstein's later philosophy. For what we find here is clarificatory analysis (understood as elucidating the 'grammar' of our concepts) *without* an assumption that complete analysis is possible; indeed, the latter is now explicitly rejected. Phillips and Hanna are thus in agreement on the central development in Wittgenstein's conception of analysis from his early to his later work.

Wittgenstein is not the only philosopher who came to reject decompositional or reductive conceptions of analysis from the late 1920s onwards. In 'C. I. Lewis: Pragmatism and Analysis', Thomas Baldwin discusses the work of C. I. Lewis, who was Quine's predecessor as Edgar Pierce Professor of Philosophy at Harvard from 1930 to 1953, and who might reasonably be regarded as the most significant American analytic philosopher in the period prior to the Second World War. Baldwin notes Lewis's work on modal logic, for which he is most well known, but concentrates on his book *Mind and the World Order*, which was published in 1929. Baldwin starts by discussing Lewis's problematic account of 'the given', which he argues is an incoherent hybrid of two different conceptions of sense-experience, being viewed by Lewis as both indescribable and yet infallibly identifiable. Despite this account of the given, however, empirical knowledge is determined, according to Lewis, not by the 'qualia' of individual experiences but by the intersubjective patterns among them. As Lewis puts it, "it is relation which constitutes that *intelligibility* which is essential to knowledge" (quoted on p. [7] below).

Baldwin goes on to show how this emphasis on relation was reflected in rejection of a decompositional conception of analysis and endorsement of a holistic one, although traces of the decompositional conception can still be found. On Lewis's official view, analysis is not the 'dissection' of a complex concept into simple concepts that directly apply to qualia but the identification of the relations between concepts: "logical analysis is not dissection but relation" (quoted on p. [8] below). The results of analyses are analytic a priori propositions, according to Lewis, and this leads to the question of what determines our choice of such propositions as the governing principles in the realms of logic, mathematics and science. It is

here that Lewis's pragmatism comes out: our choice of principles is made on pragmatic grounds, and hence pragmatic values infuse the very foundations of knowledge and truth.

In the final section, Baldwin compares Lewis's views with those of Carnap and Quine. In the case of Carnap, he considers *The Logical Syntax of Language* (1937), where Carnap famously advocated his principle of tolerance: "In logic, there are no morals". Here the similarities are striking, the main difference lying in Carnap's having taken the linguistic turn. Baldwin criticizes the relativist implications of both their positions, however, although he remarks that Carnap's linguistic approach at least "has the merit of removing the logical space for a conception of the given" (p. [14] below). In the case of Quine, Baldwin considers why Lewis did not follow his pragmatism through and, like Quine, reject the analytic/synthetic distinction; the answer is that Lewis remained wedded to a Platonist conception of meaning. Baldwin suggests, though, that Lewis's influence on Quine was far greater than has generally been recognized (and than Quine himself acknowledged).

The final paper in Part Two is my own contribution to the volume. Entitled 'Conceptions of Analysis in the Early Analytic and Phenomenological Traditions: Some Comparisons and Relationships', it can be seen as drawing together some of the threads in the previous papers and filling in further elements in the overall story of analysis in early twentieth-century philosophy. In exploring some of the methodological connections between the analytic and phenomenological traditions, it also serves to introduce some of the themes in Part Three.[19] In the first section of the paper, I outline the conceptual framework that I have developed to explore conceptions of analysis in the history of philosophy. In particular, I distinguish between three main modes of analysis, which I call the regressive, the decompositional and the transformative (as mentioned on p. [8] above, and alluded to in a number of the other papers in this volume). The relationship between the latter two has been one of the main themes in the overview I have been offering in the present introduction.

In the main body of the paper, I explore three comparisons - between Frege and Russell, between Moore and Franz Brentano (1838-1917), and between Carnap and Husserl. With regard to the first, I argue that while Frege and Russell both used transformative analysis, they did so for different philosophical purposes. Frege did not share the eliminativist motivations of Russell. The contrast I draw thus complements the explanation of the differences between Frege and Russell given by Levine and the account of the relationship between decompositional and transformative analysis in Russell's philosophy offered by Griffin and Hylton. In the case of Moore and Brentano, I show how they both shared a decompositional conception of analysis, and consider the question of Brentano's influence on Moore. With regard to Carnap and Husserl, I sketch Husserl's relationship to early analytic philosophy and his rejection of crude decompositional forms of analysis, and compare Husserl's development of a richer conception with Carnap's method of 'quasi-analysis' in his *Aufbau* of 1928. I end by clarifying their ideas of 'explication', a term which they both

used in their later work. Carnap's conception of explication has already been mentioned, in introducing the papers by Reck and Linsky, in particular. Husserl's conception, though related, is rooted in his appeal to 'intuition', which anticipates issues discussed in the papers in Part Three.

3- Bolzano and Husserl: Semantic, Conceptual and Phenomenological Analysis

As the papers in Part One confirm, analytic philosophy as we understand it today has its origins in the work of Frege, Russell and Moore around the turn of the twentieth century, and as the papers in Part Two show, that work was developed in various ways as analytic philosophy blossomed in the period that followed. As we have also seen, however, the founders of analytic philosophy were not operating in a vacuum. They were both reacting against earlier forms of philosophy and yet at the same time subtly transforming certain key conceptions that they inherited, such as the decompositional conception of analysis associated with Kant, in particular. A proper understanding of the nature and development of analytic philosophy thus requires situating it in the broader historical context. One important philosopher active in the period between Kant and early analytic philosophy is Bolzano, who was born in the year that the *Critique of Pure Reason* was published and died in the year that Frege was born. Although Bolzano had no direct influence on the founders of analytic philosophy, many of his ideas anticipated ideas that we now treat as characteristic of analytic philosophy, and he offered a powerful critique of Kant's philosophy, as Sandra Lapointe shows in 'Bolzano's Semantics and his Critique of the Decompositional Conception of Analysis'.

Lapointe begins by elucidating the decompositional conception of analysis that can be found in Kant's discussion of analyticity, and identifies what Bolzano took to be responsible for the inadequacies of this conception, namely, the deficient understanding of the distinction between the properties of objects and the constituents of concepts. Bolzano's critique of Kant is grounded in his own semantic theory, and Lapointe goes on to explain some of the main elements of this theory, focusing, in particular, on his conceptions of 'Proposition' ('*Satz an sich*') and 'Idea' ('*Vorstellung an sich*') and his account of analyticity. In the case of the former, there are instructive comparisons to be made with Frege's conception of sense (*Sinn*), and Lapointe clarifies the process of analysis that Bolzano saw as required to exhibit the Proposition expressed by an ordinary sentence as used on a given occasion. Such a process of analysis Bolzano called '*Auslegung*', involving the paraphrasing of the ordinary sentence into a sentence of a semi-formal canonical language that expresses its meaning completely and unambiguously. Here, too, we see a similarity to Russell's idea of analysis (after 1905) as involving the transformation of ordinary sentences into sentences of a logically perfect language which mirror the reality they represent. In the case of analyticity, Lapointe shows how Bolzano's account made use of the method of substitution, which was later to play a role in the work of both Alfred Tarski (1901-83) and Quine - although neither was directly influenced by Bolzano.

While Bolzano may have had no direct influence on the development of analytic philosophy, however, he did have an important influence on Husserl, as Lapointe notes in the final section of her paper. Bolzano's influence on Husserl is also mentioned by Dermot Moran in 'Edmund Husserl's Methodology of Concept Clarification', Bolzano being seen as

having inspired Husserl to investigate our knowledge of ideal objects such as numbers and universals (e.g. Redness). Traditional empiricism went wrong, according to Husserl, by failing to provide an adequate account of such knowledge, and one of the purposes of his new method of phenomenological analysis was to offer a better account. Moran notes Husserl's apparent agreement with the empiricist in claiming that "no concept can be thought without a foundation in a concrete intuition" (quoted on p. [5] below), and explains Husserl's construal of knowledge as the 'fulfilment of intuition', but emphasizes that Husserl's concern was to expand the range of what counts as 'fulfilment'. (As suggested above, it is instructive to compare Husserl's views here with Russell's early assumption that we can be 'acquainted' with universals and the role that the principle of acquaintance plays in Russell's philosophy.)

In his paper, Moran offers an account of the development of Husserl's conception of phenomenological analysis from 1891, when his *Philosophy of Arithmetic* was published, to 1907, when Husserl started to see his philosophy as a new kind of transcendental philosophy. From the very beginning, Moran argues, Husserl was concerned with identifying certain subjective conditions of objective cognition, which he came to call 'phenomenological' conditions, and distinguishing these from merely 'psychological' conditions. Moran illustrates this in section 5 of his paper, in discussing Husserl's early account of our grasp of the concept of number. Husserl distinguishes the psychic acts that he regards as essential in our coming to grasp the concept of number, such as the intellectual synthesis he calls 'collective combination', from the psychic acts that may be involved on particular occasions but are not essential, such as our ability to order things in space and time.

After the *Philosophy of Arithmetic*, Husserl's attention shifted to the foundations of logic and epistemology, and Moran explains the development of Husserl's method in the two volumes of his *Logical Investigations* (1900-1). Husserl described this work himself as "the result of ten-year long efforts for a clarification of the pure idea of logic by a return to the bestowing of sense or the performance of cognition which occurs in the nexus of lived experiences of logical thinking" (quoted on p. [19] below). Such a search for clarification can be found illustrated in Husserl's discussion of the sense in which we talk of mathematical objects 'existing'. Moran ends by addressing the question of the relationship between phenomenological analysis and linguistic analysis. According to Husserl, the latter is at best only a preliminary to the former, the aim of which is to uncover the a priori forms of consciousness - the necessary conditions of our apprehension of objects.

Husserl's method of phenomenological analysis is also discussed in the final two papers of Part Three, Leila Haaparanta comparing it with ancient Greek geometrical analysis and Amie Thomasson comparing it with the form of conceptual analysis found in the later ordinary language tradition of analytic philosophy. In 'The Method of Analysis and the Idea of Pure Philosophy in Husserl's Transcendental Phenomenology', Haaparanta begins by offering a characterization of 'pure' philosophy, in terms of the

exclusion of argumentation based on empirical beliefs, and then clarifies the process of 'phenomenological reduction', understood as the movement from the 'natural attitude' to the 'philosophical attitude' whereby the various assumptions and commitments of everyday life and science are 'bracketed' in order to find the underlying logical forms and essential concepts. In section 4 she explains Husserl's distinction between three elements of cognition - noesis (the cognitive act), noema (the cognized as cognized) and the object itself (towards which the cognitive act is directed), and outlines the debate that there has been over how these are related. She then highlights what she sees as the key issue here, which concerns the relationship between the objects of the natural attitude and the objects (noemata) of the philosophical attitude. Must the latter not be the same as the former if phenomenological analysis is to be correct, but if this is so, then what does analysis achieve? What we have here, of course, is yet a further version of the paradox of analysis.

Haaparanta does not confront this paradox directly, but instead elucidates the process of phenomenological analysis by comparing it with problem-solving analysis in ancient Greek geometry (though not as understood by Husserl himself). Just as the geometer starts by taking the figure to be constructed as 'given', in order to 'analyze' it to identify the parts and their relationships, and the relevant principles, by means of which to show exactly *how* it can be constructed (in accord with the terms of the problem), so too, Haaparanta suggests, the phenomenologist takes the objects of the natural attitude as given and seeks to understand their formation. Like geometrical analysis, she writes, "phenomenological analysis is stepping backwards, researching into how experience is structured. The phenomenological description is the phase of construction. Phenomenologists construct in the peculiar sense that they articulate or make the constitution of the world of the natural attitude explicit." (p. [14] below) She concludes by noting the analogy that can also be seen with Russell's theory of descriptions, where expressions, too, are transformed in yielding a deeper understanding of what is (supposedly) meant.

In the final paper, 'Conceptual Analysis in Phenomenology and Ordinary Language Philosophy', Amie Thomasson argues that both phenomenology and the ordinary language tradition of analytic philosophy can be seen as offering the same response to the crisis that reached its head at the end of the nineteenth century regarding the proper methods and role of philosophy. In particular, she suggests, they were both responding to psychologism in taking philosophy to be concerned with the analysis of meanings or concepts. In the first two sections she counters some misconceptions about the differences between analytic philosophy and phenomenology, and in the final two sections clarifies the fundamental method that she sees them as sharing.

In the first section she argues against the view that while phenomenology is concerned with analyzing meanings of our mental states, analytic philosophy is concerned with analyzing meanings in language. Husserl, too, stressed that we must begin with linguistic discussions while keeping in mind that grammatical form can be misleading. On the other side, within

ordinary language philosophy, the aim is not insight into words for their own sake but understanding of the concepts they express. Indeed, as Thomasson notes, Austin himself at one point suggested that his method might be called ‘linguistic phenomenology’. In the second section, she rebuts the charge that Husserl’s phenomenology invoked a baroque ontology of essences and a mysterious epistemology of ‘intuiting’ them. What Husserl meant by ‘inspection of essences’ (‘*Wesensschau*’), she writes, was “nothing more than beginning from a presentation of an object of a certain kind and imaginatively varying the presentation in various ways to yield general truths about what changes can and cannot be tolerated if we are to be presented with an object of that kind” (p. [11] below). It is thus comparable to the method of considering imagined cases employed so extensively by analytic philosophers. And talk of ‘essences’, she goes on, is no more than the linguistic hypostatization of general truths about concepts. As she sums it up, “Husserl’s essences seem more properly understood as pleonastic than as Platonistic” (p. [15] below).

In the final two sections, Thomasson suggests how Husserl’s method of ‘eidetic variation’ can be seen as a form of conceptual analysis, via the transformations effected by hypostatization, which at the same time yields ‘ontological’ results. But ‘ontology’ must here be interpreted as similar to the ‘descriptive metaphysics’ that Strawson advocated, Thomasson writes, which “differs from conceptual analysis only in ‘scope and generality’, by its concern with interconnections among our most general and basic concepts” (pp. [19-20] below). We have seen how one strand in analytic philosophy culminates in connective analysis; if Thomasson is right, then a similar strand can be discerned in phenomenology. Certainly, the similarities in methodology between certain strands in analytic philosophy and phenomenology are striking, and elucidation of one can be used to throw light on the other.

4- Conclusion: The Varieties of Analysis

What conclusions can be drawn from these studies of analysis in early analytic philosophy and phenomenology? At the very least, they should correct some common misunderstandings. It is frequently assumed that 'analysis' just means decomposition, and that it is analysis in this sense, particularly in the form of conceptual analysis, that is characteristic of analytic philosophy. But as we have seen, there are many other forms of analysis in play, even if they combine with decompositional analysis in intricate ways in actual practices of analysis. Moreover, the decompositional conception and its centrality in reductive projects was subjected to criticism at just the time that analytic philosophy began to establish itself as a tradition in the early 1930s.

Distinctive forms of analysis did indeed emerge in analytic philosophy and phenomenology. In my view, the most important of these was Frege's introduction of quantificational logical analysis (a type of transformative analysis, extending function-argument analysis from mathematics to logic), which was further developed and pursued by Russell, most notably, in the theory of descriptions. Not only did this open up new possibilities of philosophical analysis (reductive, eliminative and explicatory) but the issues raised by its use also set much of the agenda in the development of analytic philosophy. As far as phenomenology is concerned, the introduction of the method of reduction was what Husserl himself saw as his breakthrough. Aimed at identifying and clarifying the presuppositions in our everyday and scientific thinking, this can be regarded as the central characteristic of the parallel analytic turn that took place in giving rise to phenomenology.

Moore's and Russell's rebellion against British idealism was a significant moment in the development of analytic philosophy, but it was not significant because it introduced a new form of analysis. On the contrary, it simply took over an existing, decompositional conception, in a particularly crude form. It was significant because it marked the start of a sustained attempt to follow through the implications of putting that conception to work, in the context of rejecting idealism. Russell was far more successful than Moore in this regard, most importantly, because he was able to draw on and develop quantificational logic, driven by his aim of demonstrating logicism. This led to the more complex form of analysis exemplified by the theory of descriptions, combining transformative logical analysis with decompositional metaphysical analysis. What characterizes the analytic turn in giving rise to analytic philosophy, then, was this *synthesis* of two forms of analysis, and what has characterized analytic philosophy ever since is the continually developing syntheses of forms of analysis that have their roots in the work of the early analytic philosophers. Those forms have evolved in response to the changing epistemological and metaphysical environments.

As I said above, this volume focuses on certain key figures in early analytic philosophy and phenomenology in the period prior to the Second World War. As I have tried to bring out, a revealing picture of the development of philosophical analysis emerges. But even in the period concerned, there are many other significant figures and relationships, consideration of which would shed further light on this development. A

fuller story would have to include, for example, the debate about analysis among those connected with the Cambridge School of Analysis,[20] the interaction between Wittgenstein and the various members of the Vienna Circle,[21] the impact of Carnap and other logical empiricists on the American scene,[22] the transformation of phenomenology by Martin Heidegger (1889-1976),[23] and Ryle's early engagement with phenomenology.[24]

In the wider context, there are also relationships between philosophers within and without the two traditions that are important in understanding the differing conceptions of analysis. The debate between Russell and Joachim is discussed by Griffin, but Russell also sparred, for example, with Henri Bergson (1859-1941), who was a very influential figure in the first half of the twentieth century and whose ideas on the superiority of 'intuition' over analysis Russell criticized.[25] Sigmund Freud (1856-1939) was even more important, and the influence of psychoanalysis on philosophical methodology and on Wittgenstein's method, in particular, has frequently been discussed.[26] There are also other philosophers who wrote on methodology and who developed conceptions of analysis in direct opposition to those of analytic philosophers, most notably, R. G. Collingwood (1889-1943), who was concerned to combat both Moorean philosophy and the logical positivism of A. J. Ayer (1910-89).[27]

All of this is part of the complex story that is the history of twentieth-century philosophical analysis. At a time when the history of analytic philosophy has come of age, I hope that the papers brought together in the present volume will provide the basis for further investigations of philosophical analysis and the relationships between the analytic and phenomenological traditions. At a time, too, when philosophical methodology is once again high on the agenda, I also hope that the volume will encourage greater self-consciousness about methodology and appreciation of the varieties of analysis and of the value of understanding the historical roots of the conceptions and methods that we all too often take for granted.[28]

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For an extensive bibliography on analysis in the history of philosophy, see Beaney 2003a.

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Notes

1 For detailed accounts of the development of Russell's early philosophy in the context of British idealism, see Griffin 1991 and Hylton 1990. For an account of Moore's philosophy, see Baldwin 1990.

2 For an outline of the history of the decompositional conception of analysis, see Beaney 2003a.

3 Again, for an outline of the history of the transformative conception of analysis, see Beaney 2003a.

4 Wisdom 1931. Cf. Hacker 1996, pp. 72, 281. I mention Bentham's conception in talking of 'paraphrastic analysis' in §1 of my paper (p. [6]) below.

5 This requires qualification, since Frege also came to think that phrases of the form 'The concept *F*' are misleading. So further analysis is needed. But I ignore these complications here. I say more in §2 of my paper below.

6 For details, see Beaney 2003a, §6.5, where further references can be found; 2003b, which focuses on the central role played in the debate by Susan Stebbing (1885-1943). Cf. §1 of my paper below.

7 On Carnap's conception of explication, as it developed from the idea of rational reconstruction in the *Aufbau*, see also Beaney 2004.

8 Reference to the 'phänomenologische Reduktion' occurs in the so-called 'Seefeld' manuscripts of 1905; cf. Schuhmann 1977, p. 92. The first public mention occurs in lectures given in 1906-7 (Husserl 1906-7). Cf. Mohanty 1995, p. 57; Moran 2000, pp. 138, 146, 493.

9 See, for example, the papers published in Horgan, Tienson and Potrč 2002.

10 Once again, for an outline of the history of the regressive conception of analysis, see Beaney 2003a. Let me clarify my use of the terms 'mode' and 'conception' at this point (cf. §1 of my paper, pp. [2-3] below). As I see it, in actual practices of analysis, all three of the modes I have distinguished are typically involved, as illustrated by Frege's logicist project (cf. §2 of Reck's paper below). But one of those modes may be privileged in a certain conception, and then we may speak, e.g., of the decompositional conception (such as the early Moore undoubtedly had).

11 For an account of Husserl's 'discovery' of reduction, see Moran 2000, ch. 4.

12 See Burge 2005, especially the introduction and the papers in Part III.

13 See Frege 1914; cf. Frege 2004. I discuss the relationship between Frege and Carnap on the issue of explication in Beaney 2004.

14 This has frequently been referred to as just 'Hume's Principle'; but this does not do justice to Georg Cantor's role in the story of the use of this principle. Cf. Reck and Beaney 2005, p. 1.

15 In Levine's account, these are formulated slightly differently, as (Num1) and (Num2); cf. p. [10] below.

16 Admittedly, in the *Grundlagen* (1884), Frege went on to raise some doubts about the use of contextual definition, but his subsequent introduction in the *Grundgesetze* (1893) of Axiom V, which asserts an analogous equivalence, did not indicate any change in his underlying view of the status of such equivalences, and hence of his conception of numbers as objects.

17 Levine notes that Russell introduced logicist definitions of numbers in the spring of 1901, but as late as May 1902 was still hesitant about *identifying* numbers with equivalence classes (see pp. [12, 15] below).

18 See especially Griffin 1991 and Hylton 1990, 2005.

19 It is based on a paper I gave at a conference on the common sources of the two traditions in Memphis in 2001, and which was subsequently published as Beaney 2002. I have substantially shortened it for the present volume. I also drew on this paper in my entry on analysis for the *Stanford Encyclopedia of Philosophy* (Beaney 2003a), where further details can be found, as well as an extensive bibliography on conceptions of analysis in the history of philosophy.

20 Cf. Beaney 2003b; Urmson 1956.

21 See, e.g., Baker 1988.

22 See, e.g., Hylton 2001.

23 See, e.g., Moran 2000, ch. 6.
24 See, e.g., the debate between Thomasson 2003 and Brandl 2003.
25 See Russell 1912, 1913.
26 See, e.g., Baker 2004, chs. 8-10.
27 Collingwood 1933, 1940. Cf. Beaney 2001, 2005.
28 I am grateful to the contributors to this volume, and especially Peter Hacker and Erich Reck, for comments on the first draft of this introduction.