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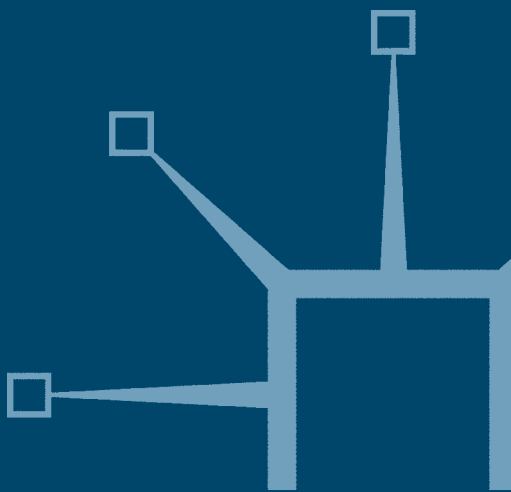
Bertrand Russell and the Edwardian Philosophers

Constructing the World

Omar W. Nasim



Bertrand Russell and the Edwardian Philosophers

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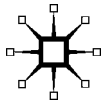

First published 2008 by
PALGRAVE MACMILLAN

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Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

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ISBN-13: 978–0–230–20579–6 hardback
ISBN-10: 0–230–20579–8 hardback

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data

Nasim, Omar W., 1976–
Bertrand Russell and the Edwardian philosophers : constructing the world / Omar W. Nasim.
p. cm.
Includes bibliographical references and index.
ISBN-13: 978–0–230–20579–6 (hardback : alk. paper)
ISBN-10: 0–230–20579–8 (hardback : alk. paper)
1. Russell, Bertrand, 1872–1970. 2. Stout, George Frederick, 1860–1944. 3. Nunn, T. Percy (Thomas Percy), Sir, 1870–1944. 4. Philosophy, British – 19th century. 5. Philosophy, British – 20th century. I. Title.

B1649.R94N37 2009
192—dc22 2008029964

10 9 8 7 6 5 4 3 2 1
17 16 15 14 13 12 11 10 09 08

Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham and Eastbourne

Dedicated to my Family, Teachers and Friends

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Contents

Acknowledgements

The publishers and I wish to thank the following for permission to reproduce copyrighted material: Extracts from letters to Samuel Alexander, reproduced by courtesy of the University Librarian and Director, the John Rylands University Library, The University of Manchester. I would also like to thank the following libraries for their support and use of their resources: The Bertrand Russell Archives at McMaster University; and the Thomas Fisher Rare Book Library at the University of Toronto, specifically their Bertrand Russell Collection and the John G. Slater Collection of British and American Philosophy.

This work began its life as a doctoral dissertation at the University of Toronto. It was there that I received the invaluable support, patient guidance and the incisive critical encouragement of both my teachers: Professors Alasdair Urquhart and Ian Hacking. Each, in their own way, had a knack for clearly letting me know what they disagreed with, and what they thought was worthwhile. Nicholas Griffin, who read the work in its entirety, as an external examiner, continued to encourage me to rework and publish the piece after I had finished my doctorate. One may definitely recognize how much this work owes to Griffin, whose scholarship in the field is a source of admiration and inspiration to me. Including Dr Jawad Shah, who first introduced me to philosophical thinking, it is to these teachers, I dedicate the present work.

At various stages of this work I benefited immensely from discussions with Professor Thomas Baldwin, David J. Hyder, Alan Richardson, John G. Slater, and especially Robert E. Tully. To all these individuals, I must express my heart-felt gratitude. Thanks must as well go to Phil Kremer and William Seager, who both read my work in its entirety, and offered some valuable criticisms and advice. I thank the series editor Mike Beaney, for his warm enthusiasm and interest to include the present work in his series. I also must thank the anonymous reviewer for the valuable suggestions designed to make this a better book. It goes without saying that none of the above individuals may be burdened with any shortcomings and errors in the present work, and notwithstanding their support and advice, only I am responsible for the faults found herein.

I cannot go on without mentioning, unfortunately only some of my dearest friends, whose names warrant mention, because of their endless support over the many years, F. Huda, S.A. Mcgee, Dr Z. Mian, Ron O'Neal, Dr K. Rajput, and G. Warsi. Last, but not least, I would like to take this chance to express my gratitude to my family, especially to my Mother and Father.

Foreword

During the first half of the twentieth century analytic philosophy gradually established itself as the dominant tradition in the English-speaking world, and over the last few decades it has taken firm root in many other parts of the world. There has been increasing debate over just what 'analytic philosophy' means, as the movement has ramified into the complex tradition that we know today, but the influence of the concerns, ideas and methods of early analytic philosophy on contemporary thought is indisputable. All this has led to greater self-consciousness among analytic philosophers about the nature and origins of their tradition, and scholarly interest in its historical development and philosophical foundations has blossomed in recent years, with the result that the history of analytic philosophy is now recognized as a major field of philosophy in its own right.

The main aim of the series in which the present book appears, the first series of its kind, is to create a venue for work on the history of analytic philosophy, consolidating the area as a major field of philosophy and promoting further research and debate. The 'history of analytic philosophy' is to be understood broadly, as covering the period from the last three decades of the nineteenth century to the start of the twenty-first century, beginning with the work of Frege, Russell, Moore and Wittgenstein, who are generally regarded as its main founders, and the influences upon them, and going right up to the most recent developments. In allowing the 'history' to extend to the present, the aim is to encourage engagement with contemporary debates in philosophy, for example, in showing how the concerns of early analytic philosophy relate to current concerns. In focusing on analytic philosophy, the aim is not to exclude comparisons with other – earlier or contemporary – traditions, or consideration of figures or themes that some might regard as marginal to the analytic tradition but which also throw light on analytic philosophy. Indeed, a further aim of the series is to deepen our understanding of the broader context in which analytic philosophy developed, by looking, for example, at the roots of analytic philosophy in neo-Kantianism or British idealism, or the connections between analytic philosophy and phenomenology, or discussing the work of philosophers who were important in the development of analytic philosophy but who are now often forgotten.

The present book, by Omar Nasim, explores the relationship between Bertrand Russell's work and the debate over the problem of the external world that took place in Britain between 1900 and 1916 – in, roughly, the 'Edwardian period'. Besides Russell, the key protagonists – the 'Edwardian philosophers' of Nasim's title – were G.F. Stout, T.P. Nunn, G. Dawes Hick, Samuel Alexander and G.E. Moore, although others, such as John Cook Wilson and Bernard Bosanquet, were also involved. Nasim identifies two issues as central to this debate, which he labels 'the Controversy': the nature of sensible objects (or 'sense-data' as they became called) and their relation to physical things and the perceiving subject. His main aim is to show how Russell's concern with these issues, which began in 1911, was influenced by this debate, as Russell developed his own position in nuanced opposition to the work of his Edwardian contemporaries.

This controversy was primarily a debate among 'realists'. Realism was a fundamental feature of the early philosophy of Russell and Moore. What Nasim shows is that there were various forms of realism being advocated in the Edwardian period, all of which contributed to the development of analytic philosophy – in particular, the 'direct realism' of such people as Cook Wilson, the 'new realism' of Alexander and Nunn, and what Nasim calls the 'proto-new-realism' of Stout (who played a major role in importing some of Franz Brentano's ideas into Britain). Common to the latter two positions was the view that sensible objects are existents in their own right; one of the issues was whether they were mental or not. Russell shared the common view, and argued that sense-data (as well as what he came to call 'sensibilia', of which sense-data were a kind) were not mental. What he crucially added to the debate was a conception of the relationship between sense-data and physical things: physical things were to be seen as logical constructions from sense-data. Stout, Nunn and Alexander had also appealed to 'constructions' to 'infer' the existence of physical things from what is immediately experienced, but Russell criticized their conceptions for being too psychological and for 'postulating' what should really be logically constructed. In offering his own solution to the problem of the external world, Russell applied the method of logical construction that he had earlier developed in the philosophy of mathematics.

Most of the scholarly work that has been done on the history of analytic philosophy in relation to Russell has focused on the early period of his thought, from his rebellion against British idealism at the turn of the twentieth century, through the emergence of the theory of descriptions in 1905, to the publication of *Principia Mathematica*, co-authored

with A.N. Whitehead, in 1910–13, which attempted to demonstrate the logicist thesis that mathematics is reducible to logic. The relationship between Russell and Wittgenstein in the 1910s has also been explored in detail, but once Wittgenstein enters the story, as standardly told, Russell begins to fade out. Nasim looks at Russell's middle period (and more specifically, the early part of this period), from 1911 to 1916, as Russell shifted his focus from logic to epistemology, and shows not only how important it is but also how it needs to be understood, too, in the context of what was going on around him. Russell was not writing in relative isolation, simply drawing out the implications of his earlier work for certain epistemological problems, but actively engaging in debates of the time, taking certain assumptions and problems for granted while at the same time bringing new ideas and methods to bear. Nasim elucidates the subtle dialectic of this engagement with great skill and insight.

Michael Beaney
July 2008

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Introduction

In 1916 a Professor of Education at the University of London, and an active member of the Aristotelian Society, began a paper with the following retrospective: 'the question of the relation between sense-data and physical objects has, during the last 15 years, frequently engaged the attention of this Society. It has also received much consideration elsewhere, Mr. Bertrand Russell's Lowell lecture on *Our Knowledge of the External World* … being recent as well as a very important instance.'[1] This paper was written in reaction to a Symposium held two years earlier by the same Society on 'The Status of Sense-Data'. The Symposium centred on the nature of sensible objects, and their relation to physical things and the subject. The two main contributors to this Symposium were also the two most distinguished philosophers of perception at the time: G.E. Moore (1873–1958) and G.F. Stout (1860–1944). Their papers stimulated, it seems, a very lively discussion. A reason, of course, for the intensity of the discussions that ensued, apart from the clarity and power of the papers, was that the Symposium was really the climax of a debate that began a good many years earlier, and many who participated were in some way or other an integral part of this history.

It was an exciting Symposium for another reason, the two giants had also modified their positions, and those in the audience were quick to notice and react to these changes.[2] Moore now expressly defended a position closely akin to Locke's representationalism, while Stout, really the one who had initiated the debate more than a decade ago, was now defending a position closely resembling that of his early opponents. Stout's paper was conceding quite a bit to the British New Realists – the two main and most vocal representatives were in the audience at the time. It was also during this meeting that Moore initiated the group present at the meeting to Bertrand Russell's recently published work, as

an alternative to Stout's and his own positions. Although recently back from the United States, Russell was not present at the meeting. It was thus due to Moore that many philosophers were introduced for the first time to the method of logical construction as applied to the problem of the external world. Moore, however, was critical of this application and labelled such constructions 'Pickwickian' at best; others disagreed. One of those who outspokenly disagreed was the Professor of Education already mentioned, T.P. Nunn (1870–1944), one of the most articulate defenders of the British New Realism, and an ardent opponent throughout the years of Stout's brand of realism. The other British New Realist, and long time opponent of Stout's doctrine, was also in the audience, namely, Samuel Alexander (1859–1938).

The Symposium, including Nunn's 1916 article, marked off the end of a fifteen-year debate that broiled between some of the philosophers during this Edwardian period. If Russell had attended this meeting, almost everyone who was involved in the debate for the last decade would have been present. A few days after the meeting, Nunn met with Russell, freshly back from the United States. On 9 July 1914, both went for a walk, and Russell explained to Nunn that he was really just too 'fed up' with philosophical discussion to have joined them at the Symposium held in Durham. Nunn went on to describe to Russell, probably in quite some detail, the discussions that took place, including Moore's latest position and his construal of Russell's constructions, and Stout's modifications and concessions. Among other things, Russell answered by further explicating his logical constructions, and by giving Nunn a copy of his 'The Relation of Sense-Data to Physics', published earlier that year – his own contribution to this debate. The following day, after skimming over Russell's article, Nunn wrote to his friend, Samuel Alexander, explaining, with much excitement, that Russell's 'article explains in part the position which Moore tried to describe and will, I think, give you as much comfort as I believe it is going to give me. Russell tells me that he started by recognizing that my paper on "Secondary Qualities" was successful as far as it went but that it needed to be completed by a theory of space and time in order to stand properly on its legs. (I told him, of course, that you and I were acutely conscious of that same fact.) The present article is an attempt to supply the needed basis. One wants, of course, time to think over the matter but speaking with cautious though early enthusiasm I must say that I find it masterly and believe that it promises to give me complete satisfaction …'[3]

The full title of Nunn's paper, referred to in this letter, is 'Are Secondary Qualities Independent of Perception?' It was a paper delivered to the

Aristotelian Society four years earlier, and made some of the clearest objections against Stout's doctrine, while also explicitly composing a defence of Alexander's realism against some of Stout's objections. Nunn's paper, in other words, was an essential part of a larger controversy, and must be understood in the context of this dialectic. One of the remarkable things to notice, therefore, in the letter quoted, is that Russell is actually placing his application of the method of logical construction to the problem of the external world squarely within this debate. In this work I propose to examine the extent to which this debate, which I label 'the Controversy', not only took centre stage in so many important papers and discussions of the Society during the period, but also significantly influenced Russell's work on the logical construction of the external world. In the course of this work, it will be shown that the influence was substantial, especially for Russell's work between 1912 to 1915, a time when he produced a prolific amount of material dedicated to the problem of the external world. From Russell's peculiar construing of 'sense-data' and 'sensibilia', his arguments for their 'physical' and 'extra-mental' nature, to his very method of logical construction as it applies to the problem of the external world, we will discover direct ways in which the Controversy shaped Russell's philosophy.

The problem of the external world – and more specifically, its two related forms: the *nature* of sensible objects, and how these latter connect or *relate* to physical things and the perceiving subject – were hot issues in Edwardian English philosophy, especially between 1900 and 1916. The Controversy focused primarily on these two aspects of the problem of the external world. Most of this debate took place in the meetings of the Aristotelian Society, the content of which was certainly much richer than what was published in the *Proceedings of the Aristotelian Society*, but the latter is what I primarily rely on in telling this story. Beginning with G.F. Stout's article of 1904 entitled 'Primary and Secondary Qualities', which initiated the Controversy, here then is its structure:

1. Stout's (1904), at first accepted by T.P. Nunn's (1906).
2. Earliest critical reply in writing was a letter to Stout by John Cook Wilson.
3. Stout restates his position in his (1905), partly in response to Cook Wilson.
4. Indirect reply to (1) through a critique of Stout's (1905) by G. Dawes Hicks' (1906a).
5. Stout replies to Dawes Hicks, and the latter retorts (1906b).

6. Alexander criticizes Stout (1) in his (1909).
7. Stout replies to Alexander also in the same year (1909).
8. Alexander responds to Stout in (1910).
9. Nunn's criticisms of Stout and defence of Alexander in (1910).
10. B. Bosanquet's (1913) criticisms of Alexander.
11. G.E. Moore's (1906) and his 1910–1911 Lectures (published in 1953), directly address many of the issues of this Controversy.
12. Symposium by Moore and Stout on Sense-Data in their (1914).
13. Alexander's *The Basis of Realism* (1914) responds to Bosanquet, and further develops his position.
14. Nunn responds to (12) in (1916).

Evidently, many philosophical perspectives were represented in this Controversy. Notice, however, aside from the eminent idealist, Bosanquet, many of the interlocutors were realists of some sort or other. On the whole, in other words, this debate took place amongst *realists*. I emphasize this aspect because if Russell's work from this period is to be partly understood within this context, as I wish to show it must, he was really grappling with other realists at the time, and trying to frame his own brand of realism in relation to many of the issues and assumptions that this Controversy revealed. G.F. Stout is, what I will refer to as, a 'Proto-New Realist', and a critical exponent of the Austrian Realists. I label him a 'Proto-New Realist', partly because I wish to emphasize the vital role his responses played in aiding the development of the nascent British New Realism. Unlike the American New Realists, it ought to be noted, the British form did not take on a neutral monism – a position that regards the basic elements involved in perception as being neither substantially mental nor non-mental. Rather, one of the defining characteristics of the British New Realism, is its belief in 'physical appearances', which also sets it apart from the direct realism of the 'Old Realists'. I argue, that it was Stout's arguments for taking sensible objects (appearances) to be existents in their own right, albeit psychical, that laid the ground for this feature of the British New Realists.

Stout alludes to his role in the development of British New Realism, particularly of Alexander's brand, in an affectionate piece composed after the latter's death, that reminisced about their long personal relationship, and, above all, their philosophical discussions. 'Shortly before Alexander began to publish the first installment of his system', recalls Stout, 'we had a discussion turning on the nature and object of sense-perception. He closed the conversation by proposing that we should each of us work out his own view in detail and then compare

results.'[4] Even though Stout humbly goes on to claim that 'I am far from suggesting that this discussion first started Alexander on his constructive work', I will attempt to show that these discussions and the resulting papers did help Alexander to formulate his brand of British New Realism.[5] The 'constructive work', which Stout refers to here, I believe has more to do with Alexander's later metaphysical system devised in *Space, Time and Deity*, published in 1920, than with the earlier material I am primarily interested in. This is important to note, mainly because many now associate Alexander's name with this grand metaphysical system, however important, overlooking many of his earlier contributions, which as we shall see are significant in their own right. Though I will confine my discussion of Alexander's earlier contributions to what is relevant to the Controversy, it will be obvious that his realism from this period should be seen as an important and distinct stage in his philosophy. I also believe that these earlier contributions are where he had the most profound philosophical impact on those around him at the time. This division of Alexander's work into, generally speaking, two stages may appear to be artificial at first, but Stout authoritatively records a change in Alexander towards a more speculative method, commenting, that earlier on, 'on many points we differed. But behind our differences there seemed always to be a basis of agreement which facilitated mutual understanding. This was so at least until the conception of his space-time system dawned upon Alexander's mind as a dazzling revelation and led him to refashion all his previous views.'[6]

Stout's 1904 and 1905 papers both sparked critical reactions. The first reaction came in the form of a private letter, which will play an important role in our story. After Stout presented his 1904 paper to the Society, John Cook Wilson (1849–1915) engaged Stout in an intense discussion about the nature of his 'representations' and 'qualities'. A month after the meeting, Cook Wilson sent a lengthy letter to Stout, detailing all the many points he diverged from him. Stout's 1905 paper 'Things and Sensations', a fascinating paper in its own right, I suggest, contained certain responses to Cook Wilson's objections. One of the reasons, then, that I will include Cook Wilson's letter, aside from its penetrating critique, is that being an 'Old Realist' he contrasts nicely with not only Stout's Proto-New Realism, but also with the British New Realism. I will also be including some of G. Dawes Hicks' (1862–1941) criticisms of Stout, primarily because the former represents another very important strain of the British Brentanian tradition. Dawes Hicks' importance, however, is not limited to his critical stance towards Stout's moving beyond this tradition, but also in revealing a very important continuity

in the ideas of both Stout and Russell – the idea that sensible appearances are *existents* in their own right.

The exchange, however, with which I will be most interested in is that which dramatically continued on between the British New Realists and Stout. The heated, but respectful, back and forth between Alexander and Nunn, on the one hand, and Stout on the other, will highlight some fundamental arguments and assumptions in their respective work. This process leads not only to some of the best (re)articulations by Stout of his doctrine, but also to the development of the nascent British New Realism itself. For instance, both Alexander and Nunn identify an assumption essential to Stout: the latter assumes in some of his arguments for the mental nature of sensible-presentations that one and the same thing cannot have more than one sensible quality at one and the same place. I call this 'Stout's Postulate'. It is then replaced by the British New Realists, by what I will call 'Nunn's Postulate', which states that one and the same thing may have many different and even contrary sensible qualities all in the same place. These postulates play a fundamental role in our story, for they directly and explicitly affect the way Russell understands the nature and the construction of space. The dialectic that centred around these two Postulates also reveals the way in which Russell's attempt to reconcile these two contrary intuitions in his analysis of 'the same place as' is connected to one of his central problems: the reconciliation of the world of physics with the world of psychology.

This is not all. Stout began in even earlier works of 1896 and 1899 to outline a philosophical psychology that would accommodate many philosophical positions and issues, including the problem of the external world. C.A. Mace, who wrote, 'The Permanent Contributions to Psychology of George Frederick Stout', goes as far as to claim, and correctly so, that Stout's 'most distinctive contribution' as a psychologist and philosopher was to 'the problem of our awareness of the self and the external world'.[7] These contributions, however, were partly made under the guise of a critical acceptance of many of the fundamental doctrines of the school of Brentano. As I shall attempt to highlight in various ways, throughout this work, Stout's unique notion of 'presentation' was partly a refined and critical inheritance of Brentano's immanent objects.[8] Stout's notion is unique, however, because he stresses, unlike Dawes Hicks and K. Twardowski (one of the most important adherents of the school of Brentano), the independent and separate *existence* of these presentations or *Inhalte* (contents). This I will argue, in Chapter 4, can be directly connected to Moore's and

Russell's concept of 'sense-data'. Indeed, the very dialectic of the Controversy provided some of the rough material out of which 'sense-data' and 'sensibilia' were given shape. It was Nunn's convincing and clear rejection of the mental nature of Stout's presentations, for example, and Alexander's emphasis upon their 'physical' nature that opened the way to Russell's peculiar shaping of sense-data and sensibilia. Russell accepted, as did the British New Realists, Stout's emphasis on the independent existence of sensible-presentations, but he also noticed that all of them assumed too much in their arguments for or against the mentality of presentations. Russell thereby gives a measured and qualified account of sensible appearances, especially in relation to the Controversy.

There is also the question of how to relate sensible appearances to the physical world. Stout proposed, at least at first, a two-stage answer. The first stage involved an 'immediate inference', and the second, what he called, an 'ideal construction'.[9] In 1905, however, he concluded that the latter is the more viable approach in understanding the relation between sensible appearances and the physical world, and abandoned immediate inferences. The notion of an 'ideal construction' goes as far back as Stout's two volume work *Analytic Psychology* (1896) and especially his *Manual of Psychology* (1899). This latter book was one of the most widely read works on philosophical psychology in Britain, and as late as the 1930s it continued to be published, edition after edition. I think it is even plausible to claim that these two works also represent, along with Stout's oral and written involvement in the Controversy, the best and most well-known constructive answers to the problem of the external world proposed during the period. The problem is, however, nowhere does Stout get into the details of how exactly an ideal construction proceeds in relation to 'thinghood', 'space', 'time' and 'causality', as he says it does, in the *Manual's* chapter on 'The External World'.

Despite this paucity, we may usefully characterize Stout's ideal constructions, based on widely spread out remarks and various applications made of this device in both his psychological and philosophical works, as a socio-psychological process meant to fill in the gaps of our everyday experiences. This process is philosophically conditioned by certain metaphysical assumptions about the *fragmentary* nature of our immediate experiences (such as, sensible objects), and some sort of presumed inductive principle, such as the need for *continuity* and uniformity in our experience of the world. But all this psychologically proceeds without the awareness of the subject; it is only when we

'logically analyse' our experience of the external world that we arrive at such philosophical conditions. It is in this way that we also arrive at the various distinct elements of our experience of the external world. There are the elements, which are immediately experienced, such as sensible appearances that 'interpenetrate' physical things, which are not immediately experienced; the two are separate and distinct existents which are somehow correlated. What secures the veracity of such constructions is the harmony and correspondence between purpose, action and results in our everyday interaction with the external world.

To get a better idea of what Stout meant by all this, it might also be useful to note in passing that Stout's ideal constructions are really a variation of something that goes as far back as Johann Friedrich Herbart's realist reading of Immanuel Kant. I only briefly mention this relation between Stout and Herbart here so that the reader may keep it in mind when encountering Stout's notion of ideal constructions in this work. As early as 1888, Stout wrote a very clear exposition of Herbart's work, probably the first such exposition of this great German philosopher and psychologist in English.[10] Even though Herbart's work was largely ignored during his lifetime, mainly because he wrote during the height of German Idealism, it, nevertheless, saw a revival after the German Revolution of 1848, when the call 'Back to Kant' was made. Herbart's realist interpretation of Kant found support from such realists as Hermann von Helmholtz, who wished, among other things, to eliminate the innate forms of intuition, like space and time, so central to the Idealist interpretation of Kant. The central idea here is that space, for instance, is a construction 'generated from the ground up', through unconscious and psychological processes. Space is not real, nor is it merely an innate idea, but rather is a symbolic representation necessary for our multifaceted interaction with the world. Stout and Herbart's constructions are, therefore, kinds of hypotheses necessary for the order, coherence and continuity of our experience.[11] It is this lineage of constructions, of which I have only given the briefest sketch, that I will refer to as 'psychological constructions'.

Alexander and Nunn both seem to accept this constructive process in their respective doctrines. Alexander, however, goes on to actually propose that the manner in which the immediate parts we are presented with in our experience of the external world are connected to their wholes (like physical things) is dictated, not only by our mental processes alone, but also by what is *given* extra-mentally in the physical things themselves. I am not quite sure what to make of this, it may just be an early form of structural realism. Nunn, however, is very

interesting in this regard. In a small, but significant book, *The Aims and Achievements of the Scientific Method* (1907), Nunn surveys the history of science and the nature of scientific hypothesis, and catalogues three different types of constructions. He argues that only scientific hypotheses or 'secondary constructions', which, instead of *replacing* primary data, *complete* them using entities of the same kind as the primary data are considered legitimate. This legitimate sense of construction is an extension of 'psychological constructions' into the realm of science. This is made clear in his distinction between primary constructions, which are constructions we make in our everyday interactions with the world (ideal constructions), and secondary constructions that further build, add to and order our primary constructions in accordance to a certain conceptual framework. The one is practical, the other theoretical.

Stout's move away from an 'immediate inference' to an 'ideal construction', moreover, represents his aversion to implicitly positing certain aspects of experience that require explanation; that is, immediately inferring only seems to exasperate the problem of surreptitiously positing aspects of experience that are in need of explanation. From Russell's perspective, Stout's intuition was quite right; but because of the psychological nature of Stout's constructions, the explanation proposed by Stout was more in line with finding the most primordial place from which to ground epistemology, and thereby our knowledge of the external world. This place was the pre-cognitive and primitive aspects of our psychological experience, where Stout felt he could secure himself from actually positing logic and knowledge, for he identified these as the aspects in need of explanation. Nunn, but especially Alexander, both consciously tread cautiously, so as not to merely postulate what their epistemological theories were meant to explain. Alexander went as far as to distinguish his New Realism from the Old by claiming that unlike the latter, his realism did not merely '*postulate*' physical things in its explanation of our knowledge of the external world; the language of 'absence' and 'presence', 'derivative' and 'primitive', 'original' and 'acquired', are all connected to this caution in the works of Stout, Nunn and Alexander.

Despite the presence of this framework, however, from Russell's vantage point, these philosophers did not go far enough. This was due partly to not properly or consistently distinguishing justification from explanation in their epistemological work, to their respective methods, and the way they understood philosophy's relation to other disciplines, such as psychology and physics. This especially becomes evident when

'psychological constructions' are juxtaposed to Russell's 'logical constructions'. Such juxtapositions, I believe, Russell himself consciously made in his work on the logical construction of the external world. Not only does Russell say that such psychological constructions have no proper and exact procedure, but that they do not provide a *philosophical* answer to the problem of the external world.

Aside from 'psychological constructions', there is also another essential strain of construction, which one might call 'mathematical constructions'. Mathematical constructions certainly have a long history, and find interesting and very potent philosophical applications, for instance, in the works of Kant and Schelling.[12] In their mathematical role, constructions begin to take on significant aspects in the nineteenth century. This is particularly the case in contrast to other mathematical methods used in the introduction and justification of mathematical objects, such as the method of postulation and the method of implicit definition. When it came to the justification of certain mathematical entities (such as imaginary numbers), some nineteenth-century mathematicians constructed such entities, in order to avoid merely *postulating* them. This is, for instance, the impetus behind the constructions of certain mathematical entities advanced by Richard Dedekind (1831–1916), and Karl Georg Christian von Staudt (1798–1867). Russell's early work in mathematical philosophy may also be seen in this light. In his *Principles of Mathematics* (1903), Russell goes as far as to attack Dedekind's construction of irrational numbers, accusing him of purporting to avoid postulations, but not actually doing so. Russell's problem with such constructions, a problem that he also urges against Giuseppe Peano (1858–1932) and others, is based on the observation that certain principles are surreptitiously introduced, which actually contaminate the purported construction with mere postulates and unwarranted assumptions. Such principles are more generally inductive principles used to support some inference, as for instance, a principle of continuity. In this phase of Russell's philosophy, he gives special preference to an inference in the construction of mathematical entities, such as cardinal numbers, that is based only on his logical principle of abstraction, which supports an inference from one kind of entity (a class) to another (a cardinal number). After the class paradoxes were discovered in the midst of this inference and the associated Platonist interpretation of the principle of abstraction, Russell, later, tried to avoid such an inference, and re-interpreted the principle in a Nominalist sense. This eventually leads to the distinction between inference and construction. The details of this history I will give in

Chapter 6. What I wish to emphasize here, as in the last chapter, is Russell's explicit intention to avoid merely postulating doubtful entities, its connection to the history of nineteenth-century mathematics, and its relation to his 'logical constructions'.

In connection to the Controversy, therefore, I hope to show several things. The problem of the external world was usually approached using 'psychological constructions', which were a confused mixture of tacit inferences based on some inductive principles (especially that of continuity), socio-psychological processes and metaphysical assumptions about the nature of the parts (like sensible objects) and the whole (such as the universe, physical things or external world). What Russell was, therefore, proposing was a new approach to the problem, an approach based, generally speaking, on 'mathematical constructions'. Russell must have seen the analogy between the former approach (psychological constructions as they were used in the Controversy) and the history of mathematics of the nineteenth century. As in the latter history, those in the Controversy also purported to avoid the mere postulation of what required explanation. There was also the similar role played, in the Controversy and in the history of mathematics, by inductive inferences and the principles supporting them, such as the principles of continuity. It is no surprise, then, that Russell attempted to use devices from mathematical construction, in order to help him propose a solution to the problem of the external world. Russell, to be sure, did not see this analogy immediately; his *Problems of Philosophy* (1912) was definitely much more in line with the inductive approach. I will show that Russell must have actually become aware of this analogy between the way the problem of the external world was construed by the Controversy and the mathematical approach to the problem of dubious entities, only after being introduced to aspects of this Controversy through his study of Nunn, made for a remarkable paper written after *Problems of Philosophy* entitled 'On Matter' (1912).

Consequently, one of the things I will try to do in this work is make sense of Russell's attempt to connect the problem of the external world and its solution, to issues in mathematical logic. I find it interesting that Russell regularly comments on the importance of mathematical logic and the recent developments of mathematics in books and articles on the *philosophical* problem of the external world. I will try to show how these comments actually make sense in the context of how the problem of the external world was treated at the time, especially in the Controversy. But even more important is the close analogy between the way philosophers during this period approached the problem of the external world

and the way certain mathematical developments of the late nineteenth century approached the problem of suspicious entities. Both attempted in their own respective ways to avoid 'postulation'. In the last chapter I will try to demonstrate that Russell was in a position to see this analogy, and that he used it to his advantage in the way he construed the problem of the external world and its solution.

In further comparing ideal constructions to Russell's 'logical constructions', which were meant to solve similar issues, one of the main points Russell makes against such ideal constructions is that they are not *philosophically* relevant. Russell's discussion of philosophical method and logical construction is meant to show how *logic* is the essence of philosophy. This contrast between types of construction will help us to understand what Russell means by claiming that the epistemological problem of the external world is between logic and psychology. We will see in Chapter 5, how the sectioning off of such disciplines as psychology, physiology, physics, etc. from philosophy will affect how we understand what we ought to take as given as opposed to derivative in our knowledge. It goes without saying that Stout, Alexander, Nunn and Russell advanced, or just simply assumed, different possible relationships between these disciplines.

Russell also objected that such ideal constructions, and psychological constructions in general, lacked a strict procedure. In Russell this procedure is provided by mathematical logic. As we shall see in Chapter 6, such a definite logical procedure for the construction of physical things and space rests on a realism about relations – something that Russell shared with Nunn. This may be why both rejected phenomenalism. Throughout my exposition of especially Nunn and Russell, however, I will only touch on some reasons why their respective notions of construction cannot be regarded as simply phenomenalist. No sustained demonstration of this point, however will be given, even though I give a treatment of the issue at the end of Chapter 6, and something is also presented in Chapter 3 with regard to Nunn's sophisticated understanding of the role that constructions play in science and their relation to Mach's phenomenalism. For the purposes of clarity, the characterization of phenomenalism I rely on is one that rejects any element in sense-experience as existing and persisting without a perceiver, coupled with the rejection of the existence of an element that is not of *same kind* that the basic perceived elements in experience are.[13]

Admirable and important work has been done by Nicholas Griffin and Peter Hylton in detailing the historical context of Russell's Idealist phase. By providing the philosophical and historical context to Russell's

transition away from Idealism, they have done a great service for Russell scholarship by highlighting the resulting nuanced and subtle features of his philosophy. What I attempt is something similar for some of Russell's middle philosophy. I will not be directly interested in Russell's Idealist phase, nor will I be directly concerned with his logico-mathematical work and his early uses of constructions (of cardinal numbers, classes, etc.). This is not to say I will have nothing to say about these issues, nor am I suggesting that nothing is relevant here with regard to my project. I want to give a partial but significant philosophical and historical background to the problem of the external world, a problem that Russell was concerned with from about 1911 onwards. This task will especially deal with a solution he advanced to this problem based on the 'method of logical construction'. Out of this background will also arise a context for Russell's 'sense-data' and 'sensibilia', and more generally for his distinctive realism at the time.

Though Russell continued the programme of logical constructions late into his career, I will only be examining this notion as it develops in and around 1911–1915. This means I will not be concerned with the interesting constructions of the self in the *Analysis of Mind* (1921), nor with the construction of matter in *Analysis of Matter* (1927). There are a few reasons for this: one is that these works reflect a thoroughly new perspective, such as a concern for more of a structural approach to constructions, and the rejection of the sense-data/sensation distinction so central to the period I am interested in. Even though these later constructions may be more sophisticated and nuanced in their exposition, I will be primarily concerned with Russell's early project of logical construction because of its philosophical context, origins and general historical motivations. That is, I wish to stay as close to the Edwardian period as possible.

I will be primarily concerned with the British philosophical scene, rather than the American or Continental one. This may seem odd to some, especially since it appears that Russell interpreters have mainly stressed his historical and philosophical links to the Continent (Frege, Meinong etc.) and the American tradition (William James, John Dewey, the American New Realists etc.). Stressing these influences upon Russell is certainly important, for no one can deny them. However, I am surprised at how little there is in the vast literature on Russell in relation to the influence, context and arguments that his own English contemporaries provided.[14] What has been written tends to be about, and understandably so, Russell's relation to G.E. Moore, A.N. Whitehead, or F.H. Bradley. Russell, however, was also involved with a larger English

philosophical scene: participating in symposia, colloquia, writing for English academic and non-academic periodicals, keeping in touch both in person and in letters with many of his colleagues, etc. At the same time many of these contemporaries seriously engaged Russell's philosophy. Even though some of these philosophers have now disappeared from current philosophy's radar, they were well recognized and influential in their time. This includes philosophers such as G. Dawes Hicks, G.F. Stout, John Cook Wilson, Sir T.P. Nunn, Samuel Alexander, B. Bosanquet and so on. This study examines how such figures played a significant role in the development of Russell's thought, especially in relation to the method of logical construction and his notion of sensible objects.

Chapter 1 deals with the doctrine Stout articulated in 'Primary and Secondary Qualities', and as reformulated in subsequent articles. The main points I will try to extract from my discussion of Stout, and which are essential to the rest of my argument, are: (1) the purported mental nature of sensible-presentations; (2) Stout's connection to Brentano; (3) the independent and separate *existence* of sensible appearances as opposed to their being simple appearances of things or aspects or products of mental acts; and (4) Stout's notion of ideal constructions. Even though I do explore a few other surrounding aspects, there is just so much in Stout that one can easily lose focus. An entire separate work can be written on Stout's philosophy, which spans at least a fifty-year period, accompanied by many changes and nuanced advances. In this way, I will stick to what is most relevant to the history I expound, especially in relation to the British New Realists and Russell.

Chapter 2 is partly set up as a back-and-forth between Stout and Alexander. This will highlight certain interesting features of British New Realism, which I conclude was partly developed in response to Stout. Alexander's doctrine will emerge as an interesting exploration of the nascent New Realism, and an important articulation used as a reference point by many philosophers at the time. My discussion of British New Realism continues on into Chapter 3, where I focus on Nunn and his unique take on Stout's doctrine. Nunn's approach is to expose implausible assumptions in Stout's arguments, and from this approach, as we shall see, Russell greatly benefited in his own work on the problem of the external world. In this chapter I will also take some time out to explore Nunn's construal of scientific hypothesis as constructions, and their relation to Mach's phenomenalism. Chapter 4 deals with Russell's sensible objects: sense-data and sensibilia. In many ways, this chapter is a result of the chapters preceding it. In it my main

purpose is to show exactly how Russell's sensible objects were a product of this Controversy. In order to appreciate some of the novelties and some of the constraints Russell placed on sense-data and sensibilia, I show that they must be seen from within the context provided by the Controversy. Finally, Chapters 5 and 6 will examine how logical constructions are directly connected to some of the issues in the Controversy. Specifically, I will explore how Nunn's and Stout's Postulates play an essential role in Russell's construction of spaces, and his important distinction between the place *from* which something appears and the place *at* which it appears. Stout's ideal constructions will be contrasted with logical constructions, and more generally with Russell's concern with a scientific method for philosophy. Many of Russell's epistemological doctrines, in this period, it will be found, are a critical acceptance or rejection of many of the assumptions and notions of Stout, Alexander and Nunn. Lastly, I will try to understand why Russell insisted on introducing mathematical and logical methods into the philosophical problem of the external world, and why he repeatedly insisted that those working on such philosophical problems must also be familiar with the recent developments in mathematics.

It may be evident from this outline that due to the nature of the argument there will be some overlap and repetition; this however is unavoidable. The argument is arranged from chapter to chapter as a build-up to some of the vital conclusions I make with regard to Russell's place in the Controversy. The reader I hope will benefit from the exploration of the various threads of the argument, all which have some bearing on Russell's own solution to the problem of the external world. These various threads I attempt to tie together in the last three chapters. The first three chapters, however, are also essential to this snowball effect, especially if one is to capture the full extent of the subtle refinements, advances, observations and influences between all those involved in the Controversy, including Russell.

Finally, a brief word about the label 'Edwardian' in the title of this book. Despite disagreements as to what exactly should be regarded the Edwardian period, and despite the fact that King Edward VII died on May 1910, some historians place the period between 1901 and the beginning of the First World War.[15] Without getting into the details, I have simply taken for granted these dates as correctly demarcating the Edwardian period. The Controversy begins and roughly ends between these dates as well, and so may be labelled 'Edwardian'.[16] The philosophers involved in this Edwardian Controversy, specifically Stout, Alexander and Nunn, I take to be, at least some of the Edwardian

Philosophers, but certainly not all. Demarcating the philosophers involved in this way, will allow me to make some claims about the attention and importance allotted to their respective philosophical works. Hence, the Edwardian period, so demarcated, roughly corresponds to certain phases in the respective philosophical proposals advanced by the protagonists of this story. Within this period, that is, they develop their philosophies in original ways, clearly marked by important shifts by the end of the period. On the one hand, Nunn's most significant philosophical contributions, which seem to be overlooked by many historians of analytic philosophy, actually occurred in this period, while afterwards he shifted his attention to mathematical education. On the other hand, Stout and Alexander are usually regarded to have their most influential philosophical periods, respectively, before or after this period; part of my effort, then, is to demonstrate the impact of their work, particularly in the context of the Edwardian Controversy. Russell too may be considered an Edwardian philosopher, considering that some of his most important work at least was done in this period, and that he was absorbed in the issues of the Controversy. The label does not suggest that the respective careers of the philosophers did not extend before or beyond this period; it is only meant to hone in our attention to a specific timeframe, which sets an important background and intellectual context for Russell's ideas in epistemology – a context largely overlooked by the vast literature in Russell studies.

1
Stout's Proto-New-Realism

In this chapter I will examine Stout's solution to the problem of the external world. Specifically, I will be looking at how he tried to solve this problem within a series of articles that began with one published in the *Proceedings of the Aristotelian Society* in 1904.[17] This series of articles continued well into the middle of the second decade. This momentum was mainly due to the vast amount of interest generated by some of the articulations and solutions advanced by Stout. Many of Britain's brightest philosophers engaged Stout's doctrine head on. This dialectic is what I have called the Controversy.

Without an understanding of Stout's position as developed within this period, one will not only have a meagre idea of what was happening generally in epistemology in Britain at the time, but more specifically, one will also have an incomplete picture of the Controversy.[18] A proper understanding of this Controversy will provide an appropriate context for the treatment of the problem of the external world by many British philosophers at the time, including a context for understanding Russell's solution to the same problem. It is not a coincidence that it was also within these years that Russell developed his idea of logically constructing the world. My purpose in this work is to show exactly how Russell was influenced by this Controversy.

The aim of this chapter is to outline Stout's doctrine.[19] This, however, will be done by highlighting only certain features of this doctrine. What I will be highlighting will be determined by two related features, the first feature is a question: how did Stout's articulation of the problem of the external world and his solution to it contribute to Russell's project of logically constructing the physical world? The second feature is related to the first; the answer to this question will have both a direct and indirect component. The direct component will trace very specific ways in which Stout

directly influenced the various aspects of Russell's development with regard to the problem of the external world. The indirect way is a clear path. It begins by tracing the ways in which Stout directly affected the development of the nascent British New Realism, and then ends with another direct path of influence, from the British New Realists to Russell. Both T.P. Nunn and Samuel Alexander, the British New Realists, were actively involved in the Controversy, especially against Stout. In many ways, as I hope to show in the next two chapters, the British New Realists owed much of their development to Stout's articulations and reactions. With these two features in mind, I will try to explain the relevant aspects of Stout's doctrine. For if these two features are kept in mind the real import of Stout's doctrine for our understanding of Russell will arise.

After dealing with Stout's importance and background in the general history of British thought, I will divide this chapter into two broad parts. In the first part, I will deal with Stout's views as expounded in his early articles, along with some helpful objections and criticisms made by John Cook Wilson. The points I wish to emphasize with regard to Stout's doctrine are all related to what he calls 'presentations'. Four related features of presentations will be earmarked and elaborated; namely: their relation to Stout's discussions of primary and secondary qualities; their mental nature; their representative function; and finally their distinctive role as genuine psychical existents. I will show how presentations arose from Stout's early engagement with Brentano's doctrine of intentionality. A point will be made to also show how the use of this notion is not meant to be another type of representationalism. In later chapters all these features will eventually be related to the British New Realists and Russell.

The second part of this chapter will deal with a broad, but important, notion of Stout's called 'ideal constructions'. This notion is spread over many texts, some of which are strictly psychological. I will make an effort to sift out what is important and interesting for our purposes. I believe some important things can be learnt from considering Stout's ideal constructions, especially by way of contrasting them (as Stout himself does) not only with those of Mill, Locke and Kant, but also with Russell's notion of 'logical construction'.

I PRESENTATIONS

1.1 Situating G.F. Stout

George Frederick Stout (1860–1944), at the time of delivering the 1904 paper (6 June 1904), was the President of the Aristotelian Society. Stout

was already a giant in the field of philosophical psychology, thanks mainly to two earlier books: *Analytic Psychology* (1896), and *Manual of Psychology* (1899). The latter work came out in many subsequent editions well into the late 1930s.[20] Both these works were widely read. By this time Stout had also been the editor of *Mind*, the most important British journal of philosophy and psychology, and along with his teacher, James Ward, Stout dealt 'the death-knell [to] Lockean associationist psychology and set the stage for turning psychology in general away from the analysis of cognition and towards the analysis of character'.[21]

Even though his psychological work is extremely interesting in its own right, I will rather be focusing on his philosophical works, and there is certainly no dearth of these. As Passmore puts it, Stout 'never lost his conviction that epistemology was the key both to philosophy and to psychology'.[22] It is not surprising then that much of what he wrote was dedicated to epistemological matters. It must be noted, however, that the lines between psychology and philosophy at this time were not as cut and dry as they are now. As we shall see throughout this study, there was quite a bit of overlap between these two disciplines with regard to problems and subject-matter. As will become apparent, Russell saw much philosophical confusion arising from the vague lines drawn between these disciplines.

Against Seargent and Passmore, who portray Stout as 'a believer in system',[23] (which I believe applies only to his later philosophy), I concur with Metz's description of Stout as being 'more concerned with working out special problems than with erecting a system or constructing an interpretation of the world as a whole'.[24] This is especially true of Stout's early philosophy – the part that I will be mainly interested in below. It is true that later on in his career Stout began to give his epistemological position more of a metaphysical context. In his Gifford Lectures (1919–1921) (later published in two volumes as *Mind & Matter* (1931) and *God & Nature* (1952)) he becomes a builder of systems. But to describe his earlier philosophical positions as Seargent and Passmore do, would not correspond to the kind of epistemological material Stout published from 1896 to 1915.

As a philosopher Stout is quite difficult to situate. His relation to English Idealism is complicated. We know that he advanced a position that Metz describes as 'a "meeting" of pragmatist, realist and idealist motives'.[25] Metz goes on to label Stout either an 'old realist' or a 'new realist' but definitely not an idealist.[26] Passmore, more accurately, describes Stout as 'pre-eminently … a philosopher of the middle way'.[27] It is in this way that Stout is usually painted by much of the literature – a philosopher who

was interested in reconciliation and compromise. This I think is true of his philosophy after about 1900. Russell's memories of his teacher brand him more of a 'Hegelian' than anything else.[28] Russell's recollection, however, refers to a Stout of his early years in Cambridge, and not to the philosopher we will be looking at, of the early 1900s.

While acknowledging the various shades of Stout's 'middle way', I will try to characterize Stout in a more decisive fashion. Doing this, will, I believe, give us more of a focus and make it easier to relate Stout as a *challenge* to his contemporaries. The way in which I wish to characterize Stout is by labeling him a 'Proto-New-Realist'. By this label I hope to stress that Stout advanced a position that was taken over as both a part of the nascent British New Realism, and a position that was in direct opposition to certain aspects of the British New Realism. In the next two chapters I hope to show that much of the budding New Realism was articulated in relation to and in contrast to Stout's doctrine.

What must be kept in mind is that Stout's doctrine itself was a realist one. That is, if by realism one understands, 'the doctrine that reality exists apart from its presentation to, or conception by, consciousness'.[29] This does not make him what Metz calls an 'Old Realist', such as John Cook Wilson. For one thing, unlike the Old Realism, Stout advances a theory of perception that makes primary and secondary qualities equally inherent in a thing, while at the same time maintaining that the sensible appearances of both primary and secondary qualities are mental. To make the difference between Stout and the Old Realism more evident, therefore, I will be including some of Cook Wilson's criticisms of Stout in this chapter.[30]

If Stout is neither a New, nor an Old realist, how can we then characterize his 'Proto-New-Realism'? In an important article of 1911, Stout suggests that his position is to be understood in light of the recent 'German' developments in philosophical psychology. What Stout is explicitly referring to here are the German and Austrian philosophers who reinterpreted content or *Inhalt* into Brentano's scheme; philosophers such as Meinong, Twardowski, the early Husserl and Lipps.[31] Stout goes as far as to claim that he was one of the first to introduce the distinction between object and content (or to use his terminology, 'presentations') as a critique of Brentano. Indeed, he introduced this important innovation two years after, but independently of Kazimierz Twardowski. The latter, in his 1894 book, *On the Content and Object of Presentations*, reinterprets Brentano's controversial notion of an intended in-existent object, and introduces in its place a sharp distinction between content and object. In many ways, Stout sees himself as a part of this realist tradition that goes back to Brentano.[32]

Before we begin to delve into some of the details of Stout's doctrine, I wish to make a note about terminology. Stout explicitly states that his term 'presentation' is equivalent to what the Austrian Realists called '*Inhalt*'[33] (usually translated into English as 'content'). This is an infamously loaded term, full of ambiguity and disagreement. Stout's 'presentations', just like Meinong's 'content', refer to a whole class of objects, which are supposed to be the objects of mental acts. Stout seems to reserve, however, the term 'representational *content*' for Locke's representationalism, a doctrine that he vigorously opposes. In later writings, Stout also refers to presentations as what is 'existentially immediate', or 'immediately experienced'. In his earlier work on the nature of presentations, Stout also refers to them as 'representations', and when he wants to specify a certain type of presentation, like a sensible object, he sometimes refers to it as a 'sensible-representation' or a 'sensible appearance'.

1.2 Stout's doctrine of primary and secondary qualities

In many ways Stout's 1904 is confused and unclear. It might be due to the lack of clarity of this text that many considered Stout to be an early British New Realist.[34] What is clear is that the main problem to which Stout addresses himself in the 1904 paper is a particular issue with regard to the distinction between primary and secondary qualities. Stout takes this particular problem to be a species of a more general problem, the problem of the external world. The more specific problem may be illustrated by quoting Thomas Reid's articulation of the issue: 'Is there anything common to the primary [quality] which belongs not to the secondary [quality]? And what is it?'[35] Very simply put, Stout's answer is that there is no such distinguishing feature, and that 'there is no essential difference between the primary and secondary attributes of matter so far as regards their connection with sense-experience' (Stout 1904, 153). Stout begins by describing this position as a defence of the 'plain man's' view.[36] What this view is, says Stout, 'remains to be investigated. When it is fairly presented it will, I think, be found defensible, and indeed the only one which is defensible for the case of primary as well as secondary qualities' (Stout 1904, 142).

As is well known, Locke described the distinction between primary and secondary qualities as being one in which the former qualities are actually intrinsic to a physical object and thus non-mental, while the secondary qualities are mental and do not therefore inhere in a physical object.[37] Secondary qualities are a species of 'mental phenomena', while

the primary qualities are a type of 'physical phenomena'. In denying this traditional view one can either suggest that there is no difference and that both qualities are mental, as does Berkeley, or one can suggest they are somehow both non-mental, as do the British New Realists.

Stout advances a third possibility in rejecting this traditional view. Stout's 1904 is meant to show that the plain man's view with regard to the qualities contains this third possibility. According to Stout, the plain man does not confuse 'between qualities of sensation and properties of external things' as the traditional view assumes the plain man does.[38] Nor does the 'common-sense' position subscribe to the view of physical science that molecules, or some 'occult powers', produce certain stimuli.[39] For if it did, Stout argues, it would be committed to the '*flagrant absurdity*' of believing in sensations that exist, persist and change without anyone perceiving them.[40] On the contrary, the common-sense view of the plain man rests on two important points: (1) sensibles, arising from both primary and secondary qualities, are 'representations' (or what he later calls 'presentations'), and these 'stand for' something else; and (2) that the distinction between what is represented and the sense-representation is 'latent' in common-sense. Taking these two points together, Stout claims that what 'are called the secondary qualities of matter are not identified with what is represented in distinction from its sense-representation, nor yet with the sense-representation in distinction from what it stands for. It is rather the complex unity formed by both and commonly left unanalysed' (Stout 1904, 144–45). What Stout proceeds to do, is present us with, a 'logical analysis' of the plain man's view.

A central aspect to this 'complex unity', which Stout stresses, is the *representative function* of sense-representations. One of the main aspects of a presentation is its ability to 'stand for' and 'represent' something other than itself. With such a representative function Stout thinks he can complete an important 'correlation', instead of a mistaken identification, between the 'qualities of sensation' (the primary and secondary qualities) and the 'properties of external things'. Hence, Stout's third alternative to the traditional view is that there are *mental* sense-representations of both primary and secondary qualities, which have a representative function that 'point beyond themselves' to non-mental properties that inhere in a physical thing. These mental sense-presentations are thus 'correlated' to the non-mental qualities that inhere in a thing, but are not identical with them. Or as he puts it, 'Our general result up to this point is that there is no essential difference between the primary and secondary attributes of matter so far as regards their connexion with sense-experience. Both are

in one way independent of sense and in another dependent on it' (Stout 1904, 153). How they are 'in one way independent of sense and in another dependent of it', basically depends on the representative function of sense-representations.[41]

What in his paper is called a 'representative function' is fundamental to Stout's position. Presentations 'represent, express, or stand for something other than themselves' (Stout 1904, 144). The first thing to note is that the 'representative value' of a presentation is *not* to be identified or confused with a Lockean representationalism. Stout emphatically stresses in a later paper that this traditional empiricist doctrine is 'founded on sheer fallacy and confusion' (Stout 1908, 302). As a matter of fact he goes on to distinguish his notion of representation from what he calls the doctrine of 'representative contents'.

'Representative content', Stout says, *mediates* between 'reality and the knower … [and that this] content is supposed to have no being except what is constituted by its appearing in consciousness … Its being is merely being-for-thought' (Stout 1908, 302).[42] There are at least two ways in which Stout maintains a difference here. The first difference is that Stout insists that his notion of representation (or presentations) do not mediate between 'reality and the knower', but is really an *immediate* connection between the two. And secondly, the presentation does not have being only for thought, but has a genuine psychical existence. A representation is not merely the way a thing appears to the mind, it is an existent which *is* the sensible appearance of a thing.[43] In the next few sections of this chapter I will explore both what Stout means by this, and how exactly his doctrine is meant to be different from a Lockean type representationalism.

1.3 Stout and the Brentano school

An important feature of the representative function is the way Stout distinguishes between a presentation's existence and its representative function. This separation can only be understood, I believe, in light of the relation between Stout and Brentano. I will now try to show how Stout's notion of presentation should be understood as a critical development and response to certain problems within Brentano's theory of intentionality. I will contrast this with a similar response made to Brentano by Twardowski. This contrast will not only reveal the significance of Stout's novel notion of a representative function, but I hope it will also show the way in which Stout must be viewed as a member of the Brentanian tradition. Finally, I also wish to discuss what Stout may

mean by his distinction between the way a thing appears and the way in which an appearance itself appears.[44] All these aspects of Stout's presentations will play an important role in understanding Russell's notion of sense-data.

In his *Psychology from an Empirical Standpoint* (1874), Brentano sets out to find the ground for the distinction between mental and physical phenomena. One of the ways in which he distinguishes the two is by arguing that all mental phenomena are 'intentional'. Mental phenomena, in other words, all make a 'reference to [an object], direction toward an object … or immanent objectivity … No physical phenomena exhibits anything like it. We can, therefore, define mental phenomena by saying that they are those phenomena which *contain* an object of intentionality *within themselves*' (Brentano 1874; 1973, 88–9; my italics). This 'aboutness' of mental phenomena is fundamental to Brentano, and is seen as one of his most important contributions to philosophy.

What are mental phenomena supposed to be 'about', what do they 'refer to', and toward what are they 'directed'? What mental phenomena are directed toward (in their intentionality) is what Brentano calls an 'in-existent object'. This object is 'immanent' and *in* a mental phenomena, like a mental act. This immanent object is present *within* mental phenomena, and as such, is completely internal to a particular psychological state. This means that the in-existent object is not an external object, nor does it 'transcend' its immanent intentionality, but is an object dependent upon and intimately related to such mental phenomena as a mental act.[45] I will continue to describe this characteristic of an 'in-existent object' as being a 'product' or an 'aspect' of a mental act.[46]

Even though the idea that intentionality, as the distinctive mark of mental phenomena, gained wide acceptance among philosophers and psychologists at the time, the doctrine of *immanent* intentionality was called into question immediately after the publication of Brentano's 1874. There are a couple of reasons for this. For one, it is not only unclear what the ontological status of these immanently in-existent objects is, but from an epistemological point of view they imprison us within the realm of ideas and the mind. In other words, if all my mental acts (of presenting, judging and assuming, etc.) are intentionally related to immanently in-existent objects alone, how is one ever to bridge the gap that is created between these latter objects and those which are said to 'transcend' them, such as external objects? If mental acts are not intentionally related to external objects, but only to immanently intended objects, then there is no way one's thinking, sensing, presenting or

assuming, etc. can ever be directly related to, or intentionally be about externally 'real' objects. This is the problem that is referred to as the 'closed circle of ideas'.[47]

It was primarily such fundamental problems that led many of Brentano's students to reconsider the nature of the objects involved. As Barry Smith puts it, 'the tricky issue as to how mental acts are able, on occasions, to achieve a directedness to transcendent objects in the world was addressed primarily by Brentano's students, and the fertility of Brentano's philosophizing shows itself not least in the ways in which it led these students to try out new and interesting solutions to this very problem'.[48] Twardowski and Stout both made similar attempts at 'new and interesting solutions' to the problem of the 'closed circle of ideas'. Both these attempts were made within the confines of Brentano's more general doctrine of intentionality. It is, therefore, in this way that I will suggest that Stout was a follower of Brentano.

Before I present Twardowski's and Stout's solutions, let me briefly look at what might be seen as an obvious response to the problem of the 'closed circle of ideas'. This response Dale Jacquette calls the 'modified realist proposal'.[49] This proposal rests on a distinction between immanent intentional objects and transcendent (or just mind-independent) external objects. When we desire a certain object we are intentionally related not only to the immanently intentional object, but also to what these latter objects properly *refer to* or stand for, that is, a certain external object. In this way, then, our mental acts are intentionally related to objects external and mind-independent.

Other than the problem of multiplying objects beyond necessity, according to Jacquette, there is another major problem with this proposal. It leaves the relationship between these two different categories of objects (the immanent and transcendent) completely 'mysterious'. More pointedly, this relationship cannot be referential or representational, because such relations are themselves mental acts. '[R]eference is itself an intentional feature of a psychological state, and so presumably partakes of the same sort of immanent intentionality that we had hoped to eliminate from Brentano's early intentionality thesis. To paraphrase Brentano, *in* referring, something is referred to.'[50] That is, referring only refers to another in-existent intended object. There is therefore no escape from this closed circle of ideas.

Twardowski, a student of Brentano's, is usually considered the first to have clearly distinguished between the content and an object of a mental act.[51] This he did with the intention of clearing up Brentano's scheme, rather than presenting his clarification as an explicit refutation

of Brentano. Twardowski simply reinterpreted Brentano 'in a more flexible way'.[52] Twardowski did this by sharply distinguishing a content (*Inhalt*) from an object. The *content*, in Twardowski's scheme, is meant to replace Brentano's immanently intended object, while the *object* is supposed to be a transcendent object intended by an act. In this way Twardowski is able to save the intentionality of mental phenomena, without falling into the trap of confusing content with objects. For it is exactly this confusion in Brentano that leads to problems such as the 'closed circle of ideas'.

Jacquette argues that Twardowski is also able to avoid the problems faced by the modified realist proposal. In the first place, Twardowski is not positing two categories of intended *objects*, because for him contents can never be objects, and as such, they cannot ever be the intended *objects* of a mental act. In other words, there is no distinction between immanent and transcendently intended *objects*. Only transcendent, external objects can be intended by any mental act. Twardowski is thus able to avoid the problem facing the modified realist proposal because he does not need to explain any 'mysterious' relation between content and objects. As Jacquette puts it, on Twardowski's account 'an immanent thought content mentally represents a corresponding transcendent intentional object'.[53] That is, according to Twardowski there is a certain sense in which the content is not only *in* a mental act, as Brentano thought, but that it is also produced by it – it is merely an *aspect* of a mental act. So it is not the content that is strictly 'representing' the object, but it is rather the mental act that is properly representing.

Like Twardowski, Stout also wishes to escape the 'closed circle of ideas'. Unlike Twardowski, who is problematically a lot more reticent, Stout openly criticizes Brentano for failing to distinguish between what he calls presentations (content; *Inhalt*) and objects.[54] He makes this distinction not as a refutation of Brentano's theory of intentionality, however, but only as an aid and patch to it. For Stout is quite heavily influenced by and sympathetic to the theory of intentionality, but in a modified form. I will not present the details of Stout's modified version of this doctrine, only because it will take us too far a field into psychology. Rather, the point I wish to emphasize here is simply that Stout was not only a part of this Brentanian tradition, but that he also seriously tried to advance solutions to some of the problems in Brentano's doctrine. For it is in search of a solution to one such problem, namely the 'closed circle of ideas', that he formulates his theory of presentations. It is this theory of presentations that Stout uses to help him solve, as we shall see, related issues with regard to the problem of the external world.

Like Twardowski, Stout believes that the problem Brentano faces with regard to immanently in-existent objects can be solved by distinguishing between presentations and objects. Only objects, in this sense, are ultimately intended by 'modes of consciousness' or mental acts. There are, however, differences between Twardowski and Stout's position. In order to illustrate these differences, allow me to quote in full what Stout says with regard to mental acts:

> I had not originally [in *Analytic Psychology*] any single word to designate what have since been called 'acts.' I was content to describe them as ways of being conscious of objects, or as attitudes of consciousness towards its object. I would now reserve for them exclusively the title of *subjective* states or processes: for presentations are not predicates of the subject in its individual unity and identity, as believing or being pleased are. The term 'act' is certainly convenient, and in view of its having already become current, I am prepared to accept it. But in doing so I make two reservations. In the first place, I would make a distinction between acts such as supposing, believing, or desiring, and the relation to an object which is common to all. All acts as such involve this relation, but it is not itself an act. It is not itself a mental state or process, but a relational attribute of certain mental states or processes. In the second place, the word act must not be taken to signify activity. (Stout 1911, 356–57)

This passage indicates ways in which Stout differs from Twardowski, but also points to ways in which Stout's position is unlike the modified realist proposal outlined above. I will only briefly point out these differences here; their importance for Stout's philosophy will be discussed later on below.

The main differences are revealed in the way in which Stout's position answers an objection to the modified realist proposal. Recall, one of the main problems that the modified realist proposal had, according to Jacquette, was the way in which it could not account for the 'mysterious' relation between immanent objects and transcendent objects. If it tries to resolve this mystery by saying immanent objects refer to or represent transcendent objects, then this solution would fail. For, as Jacquette points out, referring and representing are mental acts, and as such, can only be directly related to immanent objects, *ex hypothesi*. What is interesting in the passage above is that Stout explicitly rejects Jacquette's point against the modified proposal. Stout thinks referring or representing are not mental acts. Instead, all mental acts, says Stout,

have such a relation in common. This relation is what Stout calls a 'thought-reference', and when coupled with a presentation, becomes the latter's representative function. Another way of putting this point is to say that since one of the distinguishing characteristics of what is mental is its intentional nature, and because presentations are mental, these must also have a representative function.

The problems facing a modified realist proposal in the face of positing referencing or representing are inapplicable to Twardowski's scheme. This is because there is a certain sense in which Twardowski's contents are not only *in* a mental act, but are also produced by it – they are aspects of a mental act. So it is not the content that is strictly 'representing' the object, but rather it is the mental act itself. This response is opposed to Stout's doctrine that presentations must have a 'thought-reference' or an intentional element. Not only are presentations distinct psychical existents, according to Stout, they essentially have a representative value. This is made possible by not limiting the thought-reference to mental acts alone. For Stout, if presentations are also mental phenomena, it then follows that they are also intentional.

One of the very first philosophers to publish a response to Stout's 1904 article was G. Dawes Hicks.[55] Dawes Hicks' response, in many ways, can be seen as a realist defence of Twardowski against Stout. The whole idea of content is introduced by Twardowski so that he can distinguish between a transcendent object and something which is truly in-existent and is directly intended by a mental act. In other words, the content in Twardowski's doctrine, as we have seen, is simply Brentano's immanently intended object, with the important difference that for Twardowski content can never be objects. For Dawes Hicks this is exactly the point Stout misses when he takes his presentations to be distinct psychical existents. Dawes Hicks reminds us that 'to presentations, in the sense of contents, the predicate of existence does not rightly attach' (Dawes Hicks 1906a, 279). Rather, according to Dawes Hicks, the only thing to which the predicate of existence can rightly be attached in consciousness is the mental act itself.[56] So if presentations are not psychical existents in their own right, how are we to understand them? Dawes Hicks answers that they are merely the 'products' of mental acts.[57] When he says sense-presentations are a product of mental acts he means to suggest that it is 'not a given fact', but rather it is 'that which arises in and through the act of apprehension' (Dawes Hicks 1906a, 309). He even goes as far as to suggest that the separation of mental act from content is 'inadmissible'.[58]

In a rejoinder published in the same volume of the *Proceedings*, Stout thinks he can 'conclusively refute' Dawes Hicks' argument that existence as a predicate cannot rightly be said to 'attach' to content.[59] Much of the discussion rests on what 'content' can possibly mean.[60] There is an equivocation in the word 'content'; in one sense of the word it is equivalent to Stout's presentations, or *Inhalt*; the second sense is that of there being particular contents of a presentation ('contents of ideas'). In this context, Stout is taking Dawes Hicks to mean the latter. Thus Dawes Hicks is attacking the wrong sense of content. This point aside, Stout thinks Dawes Hicks' argument that the predicate of existence is not applicable to content or a presentation, can be reduced to the absurdity that 'existential judgments are absolutely impossible'.[61] If we take the content of our ideas in the widest sense (as does Dawes Hicks, in the second sense described) so as to include under its rubric both thought and perception, and we assume for the sake of argument that the predicate of existence is inapplicable to these, then, says Stout, existential judgements become impossible. For thought (judgement) by itself can 'never justify me in affirming' the actual existence of anything. If perception, therefore, is like thought, then perception by itself can also never justify me in affirming the existence of anything. 'If all cognitions were in this respect on the same plane with mere thoughts, then no one could ever have the slightest ground for affirming that he had money in his pocket even while he was actually feeling it and rattling it.'[62]

Stout's whole argument, therefore, is meant to show that there is a real difference between thought and perception. This difference lies in the fact that in perception we are directly related to actual psychical existents, while in judgement or thought we are only indirectly related to these. For Stout there can be no existential judgement without it being somehow based on these psychical existents in our sensory experience. Stout asks, 'if we had no direct acquaintance with any particular existent, how could we ever attain the abstract concept of existence or the problematic thought of there being particular instances of it [with which we are not directly acquainted]?'[63] If there is no existent, that is, to which we are directly related in all our cognitions, we can never be said to know the existence of anything. For an object to be the most direct form of existence that we can possibly be related to, this existent must also be psychical.[64] These psychical existents are designated by Stout's 'presentations'.

Part of the problem, therefore, with Dawes Hicks' objection is that he does not understand the importance of distinguishing the two different senses of 'content'. Dawes Hicks goes from speaking about the content

of presentations to presentations themselves, and applies what he thinks is impermissible to one as being impermissible to the other. This move is unacceptable precisely because Stout wants to keep these two senses separate. The demand for a separation of these two senses is exactly what we will see being urged below in Stout's response to John Cook Wilson. It is Cook Wilson's confusion between the 'mere appearing of a thing' and 'the appearance of a thing' that sets Stout apart from the Old Realism and some of the early British Empiricists. All in all, what must be emphasized here about Stout's position is that his presentations are supposed to be existents in their own right, which, as he says, have 'an existence and a positive nature of their own, distinct from material things and their attributes … *the sensible appearance [or presentation] is itself something that appears* …'[65] This is not only a point disputed by Dawes Hicks, but is also essentially the point which Cook Wilson allegedly misunderstands in his criticisms of Stout's 1904 paper.

1.4 Representative function of presentations

After participating in the discussions that took place following Stout's presentation of his paper to the Aristotelian Society in 1904, John Cook Wilson wrote a lengthy letter to Stout in July of the same year. This private correspondence contains a detailed examination of Stout's paper. It is an important piece because it represents a critique by one of the period's foremost Old Realists. Cook Wilson in this letter accuses Stout of being muddled and confused, especially with regard to 'trap words' such as 'representation', which need to be clarified before one can use them in a philosophically sophisticated manner (Cook Wilson 1904; 1926, 785). The main thrust of his criticism is to show how Stout's views on secondary qualities have 'infected' his understanding of the primary qualities. In line with Locke, Cook Wilson's Old Realism insists on the separation of these two kinds of qualities.

After outlining some of the features of Stout's position, Cook Wilson is puzzled by the relationship that is said to exist between a sensible-representation and what it is 'correlated' to. As we have seen, Stout believes a sensible-representation 'stands for' a quality inhering in a thing. Cook Wilson thinks that this relation of 'standing for' is 'very loose and treacherous' (Cook Wilson 1904; 1926, 769). This is because, with regard to a primary quality like extension for instance, such a relationship 'mediates' between the sensation and 'our knowledge of the extension' (Cook Wilson 1904; 1926, 771). As representative, such mediation implies that the sensation of felt extension is different from

the extension being represented. Now there are two ways in which something can be representative, according to Cook Wilson: either by having a *likeness* to what it represents, or by being *associated* to it in some fashion. But the only way these two conditions of representation can be fulfilled is if we are already, to use Cook Wilson's word, 'acquainted' with what these sense-representations represent. How else can one determine whether or not there is likeness or association? But if our knowledge of what is represented is acquired only by inference from these mediating factors (like a 'felt' or sensible extension), then it is 'impossible' to have either of these two different conditions fulfilled for representation, because inference is not direct knowledge of what is represented. So any correlation, whether of likeness or association, can only be had from already knowing directly what is represented.

Cook Wilson makes an interesting comment in this regard: 'As to this knowledge [of correlation], it seems clear that we could not get it at all if our datum was the mere sensation, given without any relation to extension. If we really get both together we might as well call the extension representative of the sensations as the sensations representative of the extension. The idea of representation, then, in fine, seems to me not only useless in philosophy but misleading as tending to obscure the solution of a difficult problem' (Cook Wilson 1904; 1926, 772). One may respond, however, that it is not a useless *idea* in philosophy, as much as it is a useless *expression*; and this is partly how Stout responds in a paper of 1905, where he replaces the loaded term 'representation' with 'presentation'.

In a very important paper from 1905, 'Things and Sensations', Stout attempts to rearticulate his doctrine to account for some of Cook Wilson's concerns above. It appears Stout took Cook Wilson's objections against the 'representative function' of presentations to heart.[66] In this article what he calls 'immediate experience' (presentations) can be taken to represent and stand for what is not immediately experienced. 'But representation', he continues, 'in this sense must be carefully distinguished from representation which presupposes a previous independent knowledge of what is represented, and an examination of its relation to that which we regard as representing it. A memory-image does not represent what is remembered as a photograph represents a person. We are not enabled to remember by first ascertaining that the memory-image is representative. On the contrary, it is only because we have already remembered by means of it that we are justified in regarding it as representative' (Stout 1905, 159–60). Stout is saying, in other words, that any representation which requires some sort of likeness or association prior to being representative, as Cook Wilson says it must, is not the sense in which he means to use this

notion. Rather, he explains, that the proper sense is the same as the sense in which a memory-image is representative of what is remembered. The memory-image represents, 'because we have already remembered by means of it that we are justified in regarding it as representative'. What this exactly means is unclear, but it seems that Stout wishes to stress that the memory-image and what is remembered by it are not separate or disconnected in ordinary experience, but only in reflection. After we have critically analysed this experience we seem to conclude that the two can be separated, but this does not imply a discontinuity in experience. Consequently, when we speak of a memory-image representing we only mean to suggest its connection to what is remembered.

We may also consult, in this regard, one of Stout's later works of 1911, 'Some Fundamental Points in the Theory of Knowledge'. Here Stout clears up the matter from another important point of view. Cook Wilson is accusing Stout of holding to the old Lockean doctrine of representationalism. Stout is clear here that the problem with representationalism is that there seems no way to go from presentations to their objects. In other words, 'the doctrine of representative knowledge … is doomed to collapse when it is brought face to face with the question: How does the mind pass from the representation to that which is represented?' (Stout 1911, 374). Stout believes that this problem has no bearing on his position, because he insists that he does not need to 'get to' what is represented from the representation – they are both known *immediately* and together. There is nothing that mediates between the one and the other. Rather, he maintains:

> I no more hold that the knowledge of other objects is mediated by presentations than I hold that the knowledge of presentations is mediated by that of objects which are not presentations … In different ways the knowledge of presentations and of presented objects mediate each other, so as to form an inseparable unity … I do not need to 'get to' the presented object; for I am there already. If this were not so, I could not even 'get to' the presentation itself in the sense of knowing it; for the presentation, in order to be known, must be *thought* as well as experienced; and it cannot be thought except as connected with what is not presentation. (Stout 1911, 374–75)

1.5 Sensible space and real space

The lessons Stout draws from the above discussion of primary and secondary qualities are, he thinks, of a general nature, which can be

used to explain other more specific issues involving sense-presentations and what they represent. Accordingly, Stout takes his findings about the representative value of appearances and applies them to a particular case of a primary quality – the case of extension. This is an interesting part of Stout's doctrine, because here he introduces a distinction between two different types of extension: a sensible extension and a real extension. The relationship between these two types of extension is of some importance here. It is not only what Cook Wilson regards as one of the weakest parts of Stout's doctrine, it is also, as we shall see later, a significant aspect of Russell's logical construction of space.

What Stout calls a 'sensible extension' (Stout 1904, 148) is the sense-representation of a primary quality, 'real extension'. According to Stout, there are two kinds of sensible extension: visual and tactual. These two sensible extensions must be distinguished from the extension of real bodies in space, because a sensible extension is distinct from a 'spatial or real extension' (Stout 1904, 148). Stout thinks that these two types of extension, the apparent and real, are distinct for at least three reasons. First, bodies occupy a 'single homogeneous, infinite space which embraces all material things and their distances' (Stout 1904, 148), while sensible extensions do not occupy this 'space'. Secondly, sensible extensions are mental sense-presentations, and are thus distinct from non-mental real extension. And finally, the 'apparent size' of a thing is contrasted with its 'real size', for a visible appearance may change its shape and size invariably, while the real thing remains unchanged.

Cook Wilson thinks that the whole idea of a sensible extension is a serious '*verbal confusion*' (Cook Wilson 1904; 1926, 782–83). It is 'inapplicable' to sensibles, whether tactual or visual. What Stout is arguing is that since sensible extensions are subjective they can have no part in the objective 'Space' of physical things. However, such a claim rests on the mistaken assumption, according to Cook Wilson, that extension can apply to sensibles, which it cannot. Therefore, Stout cannot show that sensible extensions are not in the space of physical things.

The notion of sensible extension gives rise to other '*contradictions*' as well, according to Cook Wilson. One is based on the distinction Stout draws between the real and apparent extensions. But this contradicts, says Cook Wilson, other things Stout says with regard to these two types of extension. For example, Stout says, that the 'real size' of a thing can be compared to the 'apparent size' of it.[67] 'This is only,' observes Cook Wilson, 'the comparison of one line with another, of two things (two extensions) exactly the same in kind' (Cook Wilson 1904; 1926, 783).

And if it were not of the same kind, how could they ever be compared in 'feet or inches' in the first place? Secondly, what can it ever mean to say that apparent extensions 'are not extended in the *same sense* as corporeal things',[68] when both are said to be extended? To say that sensations are extended, but not in space, 'This to my mind,' exclaims Cook Wilson, 'is sheerest contradiction. What is extended *must* be in space or it is not extended' (Cook Wilson 1904; 1926, 783). One might respond, says Cook Wilson, to this latter criticism by suggesting that we put 'extended sensations' in a 'space' of their own, distinct from the 'space' of 'objective' things. In a certain sense this is exactly what Nunn and Russell later were to do. This, however, thinks Cook Wilson, 'would involve a terrible mess' (Cook Wilson 1904; 1926, 784). What this terrible mess is, Cook Wilson never describes.

Stout argues that these sorts of problems are all based on a misunderstanding. Stout stresses that what he regards as sensible appearances (of which sensible extensions are a species) are '*not merely the Thing itself appearing*' (Stout 1905, 153). This provision is important. If it is ignored, one is bound to misunderstand Stout's doctrine and raise what he calls a 'hypothetical criticism'. This hypothetical criticism claims that the 'distinction [between a sensible extension and a real extension, or more generally the one between a sensible-presentation and what it represents] is not a distinction between two existences. It is a distinction between the material thing as it appears imperfectly or wrongly and the same thing as it appears more fully and correctly' (Stout 1905, 153). This is, to be sure, one of Cook Wilson's objections made to Stout in his letter. Stout urges that sensible appearances are more than just the 'appearing' of a thing: *they are what themselves appear*. What Stout means by this is that sensible appearances are distinct psychical existents that are distinguished from external things and their qualities, and also from mental acts. Even though they are correlated in important ways, they are not meant to be identified. It seems, therefore, that the distinction drawn between that which merely appears and a sensible appearance can rest on the former being an aspect of a mental act, which may have either a psychical or physical existent as its object. Just like Dawes Hicks, what Cook Wilson is being accused of by Stout, therefore, is confounding a genuine psychical existent with the mental act of appearing. Indeed, Stout goes on to conclude that he is justified 'in regarding sensible appearances as having an existence and a positive nature of their own, distinct from material things and their attributes … The sensible appearance is itself something that appears, and this something is not matter…' (Stout 1905, 155).

Cook Wilson has failed, therefore, to distinguish between a sensible appearance, per se, and the mere appearing of a thing, or what we also described above as the content of a presentation. So when Cook Wilson fails to make sense of how appearances can be extended, he has failed to realize that these have a 'positive nature' and existence all their own. Stout stresses, therefore, that visual appearances have an apparent extension of their own, and only these can be compared and metrically determined with one another, which amounts to saying, something Stout does not, that we have a distinct and separate apparent *space* of sensible appearances. This is something Russell was later to develop.

What is the relationship between real extension and apparent extension? Stout notices that a visible extension may change its shape and size, without this being a change in the real extension of the thing. Conceivably there are a whole series of such possible alterations and variations of the visual appearance that may result from approaching or receding from a thing, without there being a corresponding change in the thing. Stout suggests three possible ways of understanding this relationship. One is to merely identify 'the whole series of possible changes' with the real thing. This Stout thinks is unsatisfactory because it does not account for the real thing not having any change.[69] The second is to select one of the possible changes in a visual extension and identify it with the real. Stout thinks this will not do either, because no one possible change in a series has any 'logical title' to being selected over any other. The third alternative is basically the one Stout makes his own; it is to limit the range of possible change in a series by conditioning it with some sort of uniformity. As in the case of primary and secondary qualities, the representative functions of our sensible appearances are successful because of certain uniform conditions of perception. These might be practical or theoretical constraints on what we regard to be standard conditions of perception. Whatever these conditions might be, they are chosen at our convenience, as long as we abide by them strictly and they yield distinct visual appearances. Once these are in place, we can say that whatever changes we experience in apparent extension are also corresponding changes in the real extension of a thing. Thus, Stout believes himself to have shown that some sort of relationship does exist from which we may 'derive' real extension from apparent extension.[70]

Having also denied that there is any difference in dealing with tactual extension (*contra* Berkeley), he sums up his position: 'Given uniform conditions of perception, whatever these may be, differences of sensible extension and differences of more and less in the series of motor

sensations [tactual extension] represent differences in the external world and the differences as thus represented – *the differences together with the mode of representing them are what we call differences of real, physical, or spatial extension*' (Stout 1904, 152). Thus any difference in the mode of representing, be it visual or tactual, *are* differences in the real extension.

1.6 Cook Wilson's geometrical counter-example

Stout's observation, that changes and variations in sense-presentations sometimes do not correspond to changes in a thing, is vital to the argument for the mental nature of presentations. Consider the various aspects of the same thing different people see from different perspectives. All the assorted sensible appearances of the same thing, Stout claims, from all these different positions around the thing, cannot all be properties of the same thing. A coin, for instance, cannot be circular, elliptical, and straight in its shape all at once. Each person, from their own respective vantage point, is presented with a different *appearance* of the same thing. The only way to explain how one and the same thing can have many contrary qualities, according to Stout, is to introduce mental presentations. The different mental presentations are what account for the range of differences in the one and the same thing. As Stout puts it, 'Now we cannot identify the real size of a thing with the whole series of possible changes in the extent of its visible appearance, nor yet with the fixed order of their possible occurrence. For the real extension may remain constant, while its appearance alters, and it does not in its own nature include or imply the concept of change' (Stout 1904, 150).

Part of the importance of this argument rests in the fact that it is one of the main reasons why Stout introduces mental presentations. In many ways arguments like this are used by Stout to demonstrate the essential inclusion of mental presentations into any theory of perception. These arguments are also later used to point to the difference in kind between a thing and its sense-presentations.[71]

Cook Wilson thinks such arguments for the introduction of mental presentations into our knowledge of the external world rest on an important presupposition that Stout overlooks. This presupposition is supposed to show the superfluous nature of positing apparent extension, or more generally, any mental sensible-presentation. This presupposition, at least with regard to visual extension, is the fact that we are in *direct* relation with the *real* facts of *real* extension and its *real* parts. Cook

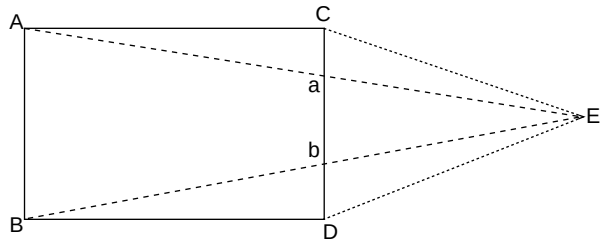

Figure 1.1 Cook Wilson's geometrical counter-example

Wilson wants to demonstrate that in any change in extension no sensible appearance, or apparent extension is needed to account for some supposed change.[72] In other words, what is needed is an argument which shows that when the real extension has not changed, but some appearance of the thing has changed in experience, we can still explain this variation without the introduction of apparent extension.

Cook Wilson employs an interesting geometrical argument in order to bring to light this presupposition. This presupposition is the 'objective fact' that 'the observer is supposed to be looking at the real extension of the object itself, and also that what he *sees* in so looking is definitely a part of the real extension' (Cook Wilson 1904; 1926, 791). Here is how Cook Wilson draws out this 'objective fact'. Let us take a rectangle ABCD in a plane, and let E be a point in the same plane at which the eye is (see Figure 1.1). Even though the lines AB and CD are *really* equal to one another, they may *appear* to vary in size from E. Depending on where E is in the same plane, either AB will look smaller than CD, or CD will look smaller than AB, or AB will appear to be equal to CD. Cook Wilson only considers the case in which AB looks smaller than CD.

In this case, Cook Wilson says, points A and B are seen 'behind'[73] points *a* and *b* (these are where the rays of A and B intersect CD on their way to E) on CD, so that as a result the line AB 'looks' smaller than CD from E. What we have then is the following: AB and CD are equal, but when AB is seen from E, as its rays pass through CD and intersect it at *a* and *b*, AB 'behind' *ab* 'looks' or 'appears' smaller than CD, even though, again, they are supposed to be equal to it. This whole demonstration, then, is meant to show how, from E, AB 'looks' smaller than CD.

What Cook Wilson wishes to point out is that in the explanation of this supposed illusion or variation we do not at all need the notion of an 'apparent' extension. Rather, all that is needed to explain away this illusion or variation are the various aspects of this 'real' extension. No aspect of apparent extension need be posited in this explanation. Such a 'perspective' from E is just the geometrical 'implication' of a certain real relation AB has to *ab* (this relation being that the points A and *a* are on the same line AE, while B and *b* on the same line BE), and that this relation is not an apparent relation found in sensible extension. AB is still equal to CD even though when seen from E it seems smaller.

It is exactly at this point the British New Realists, as we shall see, differ from the Old Realists. The former will say that AB is *not* equal to CD because it does not 'look' or 'appear' to be from E, and that there is no way of saying directly and immediately that AB is *really* equal to CD. In fact, it seems that Cook Wilson is merely postulating this. If Cook Wilson wishes to say that it really is *ab* that is smaller than CD, he has then mistakenly identified AB with *ab*. If Cook Wilson wishes to say that AB only 'looks' or 'appears' smaller because of its *real* relationship with *ab*, then he has to explain how we are to understand this *real* relationship without inference, and why we just do not say *ab* is smaller than CD. One must also notice Cook Wilson's usage of 'look' and 'appear' throughout this counter-example, especially when he says that AB 'appears' or 'looks' smaller than CD. This usage is supposed to mean the way a thing merely appears, as an aspect of the mental act of appearing. For Stout, and as we shall see for the New Realists and Russell, however, what appears here is distinct from any mental act of appearing. For what appears is itself a certain distinct existent. As a matter of fact, one of the lessons of this chapter ought to be the importance of Stout's early articulation of this difference. In later chapters we shall see how this idea was adopted by both the New Realists and Russell.

Cook Wilson is thus claiming that in order to even mistakenly attribute the fact to appearance, one must be acquainted with the real extension and real objects first. What we are therefore directly aware of in any sensation, or perception, is the real extension and real objects.[74] From these we can possibly then *infer* appearances. This direct realism is entirely contrary to Stout's, and Russell's doctrines. For both, it is rather the apparent extension and sense-presentations that we are most directly aware of, and these are not known through any inference (nor, thus, indirectly). Indeed, sense-presentations are 'real', and not just a thing appearing. Instead it is real extension, or the real thing, which is

inferred from these real existents (or sense-presentations). What Cook Wilson, therefore, is attacking is Stout's claim that immediate experience or the presentations are the given, or 'primary data', from which we can then infer physical things.

Cook Wilson, consequently, seems to assume that we have a 'bird's eye view' of the situation, that we know what the *real* situation is apart from what we apprehend. With regard to the geometric example above, there appears to be an illusion, but when we step out and beyond the 'mere appearing' of the situation we find that in *reality* AB is still equal to CD, and that whatever seems to contradict this reality can be explained by examining and understanding the real relations involved. But, as we shall see, what the New Realists will say is that no such stepping out and beyond immediate data is directly possible without inference (indirectly). One of the ways that Old Realism, or what was also known as 'naïve realism,' is characterized by the British New Realists is the way in which it assumed otherwise. 'By naïve realism,' says Alexander, 'is meant the bare assertion without evidence, or the assumption that there is an external thing of which we are conscious' (Alexander 1910, 2).[75] This is at least one way we can understand what Alexander takes to be a dissimilarity between his realism and the naïve realism of Cook Wilson.

Stout, however, believes that the proper explanation of Cook Wilson's counter-example is to say that we are presented with particular mental presentations, which are real and distinct existents in their own right, from which we can then *infer* certain features of the physical world. Apart from Cook Wilson's and Stout's explanation, there is a third alternative. One can identify the 'real size' of a thing 'with the whole series of possible changes in the extent of its visible appearance'.[76] That is, take all the various points of view, order them into some series, and then identify this whole series with the real size of AB. Stout thinks this is inadmissible, because 'the real extension may remain constant while its appearance alters, and it does not in its own nature include or imply the concept of change' (Stout 1904, 150). If this reason for the inadmissibility of the third explanation is rejected, because it merely posits a real thing in its argument, in rough outline we are left with Nunn's and Russell's respective constructions of physical things. It is thus also clear that Stout makes the same naïve realist posit, especially when he qualifies an example of change or variation by saying that while a sensible-presentation of a thing may change, the actual thing may remain unchanged. This is only an assumption about the real thing. Even though Stout sometimes makes the same arguably mistaken assumption

as the Old Realism, he tries at the same time to avert it by stressing that what is directly known in sense-experience are mental presentations. Stout now and then slips, but he certainly wants to keep what is directly known distinct from anything that could be inferred from it. The New Realists, however, as we shall see, regard Stout as not going far enough in this direction.

II IDEAL CONSTRUCTIONS

1.7 Stout's central question

The essential difference between real extension and apparent extension lies in the latter being 'primary datum', while the other is an inference from that 'datum'. This distinction not only applies to sensible extension, but also more generally to other sensible-presentations. Related to this more general sense, an important question arises: 'Confined at the outset to our own states – our own immediate experience – by what possibility can we ever transcend these? Evidently we can only do so by way of inference. *But how can we infer from A to B, when B is supposed to be something with which we are totally unacquainted?*' (Stout 1904, 159). This is the central question of Stout's philosophy. One of the extraordinary things about this central question is how Russellian it actually is. The difference, of course, is the way in which Stout attempts to answer this question. In Stout's 1904 his answer to this question rests on a certain understanding of 'immediate inference' and its relation to 'primary datum'.[77] Stout, as we have seen so far, regards presentations to be primary data, or 'immediate experience'. In his 1905 essay he further explains that these 'immediate experiences' are like the present experience of a toothache in which past toothaches or even past phases of the same toothache are not experienced at the same time. One way to understand this is to distinguish ordinary experiences and observations, from immediate experiences. The former are pervaded by inferences and associations, while the latter are not. This is exactly how Stout construes the difference later in his 1909 response to Alexander. There he says observations and ordinary sense-perceptions are 'saturated with inferences and interpretations and suggestions' (Stout 1909, 228); while what he calls here 'existentially present' existents are not so saturated.

Unlike Russell's relation of acquaintance, Stout maintains that having an immediate experience of x cannot be knowledge of x. One reason is that pure immediate experience 'does not include any distinction of subject and object. The experiencing is distinguished from the content

experienced … In this strict sense of immediacy, being immediately experienced is not the same as being known. On the contrary, it would seem that purely immediate experience neither does nor can *by itself* constitute an object of knowledge' (Stout 1905, 159). There is here an equivocation in the sense of the term 'immediate experience'. The term 'immediate experience' is sometimes used by Stout to mean exactly the same thing as his presentations. But presentations can also be immediately experienced. Russell's notion of acquaintance is more like the latter than the former sense of immediate experience. Russell does distinguish sense-data from having acquaintance with those sense-data. Another difference is that Russell's relation of acquaintance includes certain types of memory. For Stout, however, even though past toothaches maybe known, 'they are not immediately experienced at the moment in which they are known' (Stout 1905, 159). How then does Stout suggest we escape the realm of purely immediate experience, wherein the prerequisite distinction for knowledge between subject and object is not even included?

Stout attempts to answer this question by emphasizing a peculiar aspect of immediate experience. Throughout this chapter we have seen that primary datum must have a representative function, or what he also calls a 'thought-reference'. At the end of his 1904 essay Stout refers to this representative function as an 'immediate inference', which is concomitant with an immediate experience. Stout's inference also depends on principles of continuity and causation. The representative function of a presentation is what points to the physical thing. This 'pointing to' is an inference to the physical thing. As Stout says, 'All sensible changes and differences under uniform conditions of perception express or represent corresponding changes in things perceived; for by hypothesis they can be due to no other cause (and the principle of causality underlies the whole procedure). Hence we are interested in their representative value, and not in their actual existences' (Stout 1904, 145).

I will now take a brief look at some of the features of both immediate experience and immediate inference. One of these is that what is inferred must be other than the datum, and according to Stout, this is because of the very nature of inference.[78] What is essential to this kind of inference is: '(1) that the datum shall be by its intrinsic nature a fragment of a wider whole, and shall therefore point beyond itself to its own necessary complement; (2) that there shall be a thinking and willing being capable of discerning and actively eliciting the implication' (Stout 1904, 159). The second point seems to be referring to the fact that

inference is connected to certain mental acts of a subject, and that without a subject and its mental acts, inference might not be possible. The first one (1) is obviously the representative function of a sense-representation. Immediate experience, by itself, does not distinguish between subject and object. It is only when the representative function is introduced as being essential to what is immediately experienced that knowledge becomes possible.[79] Immediate experience is a datum, and since there is no such thing as an 'isolated datum', for that would be a 'contradiction in terms', all immediate experience contains something else by pointing beyond itself, and thus is 'a fragment of the one continuous universe'. It is in this way that immediate experience is 'inseparably blended' with immediate inference. The former by its very nature is a fragmentary part of a larger whole to which it must point.

However, in Stout's 1905 paper, without giving up the fragmentary nature of presentations, he repudiates this notion of 'inference'. As now understood, inference properly deals with a 'logical transition' from premise to conclusion. But neither immediate experience, nor that which it 'represents' can take this form, because a 'logical transition' presupposes the subject–object distinction. Stout claims, 'inference involves the logical transition from one cognition to another cognition. But the kind of mediacy with which we are here dealing is essential to the being of any cognition at all. It does not belong to the development of knowledge. Rather, it is necessary to constitute the germ from which knowledge may develop' (Stout 1905, 160). This does not mean there is no representative function of a presentation. It only means that inference as such is useless in describing this function. Rather, Stout uses another notion in order to preserve the 'thought-reference' of a presentation, and that is its 'halo of implications', or the 'direct implication of immediate experience' (Stout 1905, 160, 161).

If we are not 'inferring' from immediate experience, what are we doing? For Stout what is going on is much more than just 'instinct'. It is deeply connected with the 'unity and identity' of the universe in a way that implicates an individual within a 'point of view', from which her immediate experience 'radiates from itself a halo of implications'. It is interesting to note here how Stout seems to be distinguishing inference from implication with regard to immediate experience. It seems that one consequent difference between implication and inference that follows from Stout's discussion is that in implication a non-cognition can imply both another non-cognition (another purely immediate experience) or an independent not-self (described below). But this is not

all. When immediate inference is rejected as not applicable, we are left with a two-stage explanation. The first stage is one in which our presentations immediately imply what Stout calls 'actual existences'. These are the physical correlates of particular presentations. The second stage, then, is to psychologically construct physical things, using these actual existences as parts of a whole we call a 'thing'. What is important to note, for our purposes, is that after rejecting the inference model of his 1904, Stout moves on to give us a construction of physical things instead.

The key to the nature of correlation, therefore, rests on the *fragmentary* nature of immediate experience. Immediate experience, or presentations, need to be completed, and this is supposed to happen when they point to something beyond themselves. The vital aspects of this relationship are brought out best in Stout's paper of 1911. There he derives two 'universal conditions of knowledge'.[80] The first is that immediate experience, as we already alluded to, 'cannot by itself constitute the object of knowledge, apart from a thought which transcends it' (Stout 1911, 369). The second universal condition is that 'nothing which transcends immediate experience can be known except in so far as it is apprehended in an appropriate relation to something which is immediately experienced' (Stout 1911, 372). And if we take the inverse of the two together we get the corollary: 'no immediate experience can be *known* except as related to something which transcends immediate experience' (Stout 1911, 372; my emphasis).

What would guarantee that immediate experience transcends itself to a genuine 'independent not-self' (an actual existent) and not just to another immediate experience? If we were to take primary data as isolated, complete and self-contained, there would be no way out 'beyond itself'.[81] There would be no way, then, in which an individual can 'know matter or other minds'.[82] The only guarantee, we are told, is 'the unity of the universe', as opposed to the individual who 'is himself merely a fragment of the universe without any self-contained being'.[83] What Stout may mean in this regard is related to the Leibnizian doctrine of the 'halo of implications', but apart from this fact, it is not quite clear what he is getting at. It may be prudent, therefore, to take him here in his own words.

> Thought, as such, has for its ultimate object the universe in its unity; but not of course the universe in all its detail … The unity of the universe is apprehended in apprehending its parts as being partial – as being incomplete and requiring completion through their relations

> within a whole which transcends them. Now, the process through which the parts of the universe are successively revealed must start from primary objects, which ultimately specify for thought, directly or indirectly, all other objects. These primary objects can be nothing else than those modes of immediate experience which we have called *presentations*. But this implies not only that presentations are essentially fragmentary and so related in various ways to being which transcends their own existence, but also that they must be *apprehended* as incomplete, and, therefore, as related to objects which are not themselves presentations falling within the experience of the individual at the moment (Stout 1911, 373).

1.8 Ideal constructions

I have belaboured the point about a presentation's representative function. But we are now in a position to better understand what Stout means by 'ideal construction'. As Stout puts it, 'this representative function of actual sensation forms the necessary basis of the ideal construction, or construing, through which our knowledge of the material world develops' (Stout 1905, 163). To see what he means by this, I must now briefly elaborate the notion of 'independent not-self' or 'actual existences'. Stout introduces these notions in his 1905 paper, but does not use them in later publications. What is interesting about this paper, however, is that it tries to set itself apart from other forms of ideal constructions found in Mill, Locke and Kant.

In this essay, Stout wants to reconcile two perspectives that he believes are at odds with one another. Common-sense assumes an 'indivisible unity' between a thing and its sensible appearances, while in science 'the sensible appearances have an existence and history separate from the existence and history of the things. The problem is to harmonise these apparently conflicting views while doing justice to both' (Stout 1905, 150).[84] Unlike in his 1904 essay, Stout no longer attributes to the plain man a 'latent' understanding of the separation between the sensible qualities and what they represent.[85] Rather, Stout now urges that for the plain man there is a continuity, and that in 'ordinary perception, we do not, in general, make any distinction between the thing perceived and its sensible appearance … we are not also aware of something else which we call the visual presentation [of an object]' (Stout 1905, 151). It is only through 'critical reflection' that we are able to distinguish these two elements in experience.

The reconciliation depends on 'how it is that one of these existences – the sensible appearance – so interpenetrates the other – the material thing – that apart from it there would be no material thing' (Stout 1905, 155–56). Stout goes on to discuss three ways in which these two have been thought to 'interpenetrate'. The first is Locke's doctrine that sensible appearances are images or copies of the material world. Even though Locke introduces primary qualities, which are supposed to really inhere in a thing, our knowledge of them is not direct, but are mainly mediated by what resembles them in our sensible appearances. Stout thinks this doctrine will not do, because it is incapable of substantially making a difference between a thing and its sensible appearances. In other words, if this theory were true, 'we should never even be able to compare the nature of matter with the nature of sensible appearance, so as to judge of their resemblance or difference' (Stout 1905, 156).

The second attempted ideal construction Stout describes is Mill's. Mill starts out by accepting one of Locke's propositions, that we can only know sensible appearances, but he rejects Locke's other proposition, that we do not know a thing directly. From both these it follows that sensible appearance and matter must be identical. Stout thinks the 'essential' aspect of this view is that 'actual existence belongs not to matter … but only to sensations as they come and go' (Stout 1905, 156). What happens then to the distinction between sensations and a thing? According to this doctrine the distinction can be accounted for by a further distinction between sensible objects actually experienced and 'a systematic order which comprehends not only actual but possible sense-experience' or a system of 'unrealised possibilities'. There are 'two fatal objections' to this view, according to Stout, however. First is that the notion of unrealized possibilities, which are used to distinguish things from sensible objects, is not in accord with both the common-sense and the scientific notion of a 'physical thing'. The material world 'is not a system of possibilities, but of actual existences, persisting, changing and acting on each other' (Stout 1905, 157). Secondly, Stout objects that the 'systematic order' of possible sensations is merely a 'fiction'. I do not quite understand why being a fiction is a fatal objection. Stout, however, does say that Kant avoids this second problem by allowing the 'content of sense-experience, elaborated according to such rules of combination, [to yield] an order which is objective in the sense that it is independent of the vicissitudes of the private history of any individual mind' (Stout 1905, 157). What Stout might mean then is that Mill's system of a fixed and uniform order of possibilities is in no way governed as to make it objective, in the Kantian sense.

The third ideal construction Stout considers is that of Kant's. For Kant, matter is an ideal construction 'for which the material is supplied by the content of sense-presentations' (Stout 1905, 157). This construction, however, is governed by a set of 'universal principles or rules of synthesis', which determine the connections between sensible appearances independent of their 'coming and going'. This yields a rule-governed order to the constructions that make it 'objective'. Stout thinks that Kant's ideal constructions are more plausible than the last two. This is for two related reasons. First, Kant is able to show 'how and why the nature of sensible appearance so interpenetrates the nature of matter that apart from sensible appearance there would be for us no matter' (Stout 1905, 157). Secondly, he is also 'successful' in showing how, at the same time, matter must be distinct and independent of sensible appearances.

Despite the apparent success of this last point Stout believes the 'explanation offered' is faulty. For the '*kind* of being' Kant ascribes to matter is really not in accord with common-sense or science. Kant attributes a purely conceptual order of being to matter, which thus does not take into account its 'actual existence' as enduring, persisting, changing, acting and being acted on, independent of an observer. Stout fails to understand how the mere *concept* of matter can play a role in the non-conceptual, physical and actual material world. The main problem for Stout is that Kant, accordingly, divorces content from existence.[86] Stout argues that such a divorce will not account for the actual changes in material things. This divorce Stout wishes to avoid in his own constructions, and thus he introduces 'independent not-selves' or 'actual existences'. Kant is, therefore, being accused of not connecting up the content of a presentation with the existence of independent material things.

If the content, out of which matter is constructed by Kant, is not intimately connected with existence, it will be incapable of explaining properties that belong only to actual existences and not to conceptual content. These might be accounted for, however, by introducing the notion of sensible objects existing and changing without anyone perceiving them. But again, this is the 'flagrant absurdity' that Stout wishes to avoid. In order not to plunge into the same pitfalls as Kant, Stout thinks he can connect sensible appearances directly to a 'system of actual existences which are at least known as enduring, changing, and interacting, and known as connected in the most intimate way with our sense-experience' (Stout 1905, 158). He avoids, therefore, the flagrant absurdity of attributing persistence to mental sensible objects, independent of a perceiver, by attributing it instead to actual existences or what Stout calls 'independent not-selves'. These are independent of

any subjective mental act, and are thus not reliant on a subject for its persistence and endurance. The central result is that an ideal construction must be a '*construing*' of sensation by 'the nature and behaviour of an actual existence other than sensation or any immediate experiences of the individual' (Stout 1905, 158).[87]

This connection is built on Stout's understanding of a representative function: the sensible appearance 'represents' or 'stands for' an independent not-self. Independent not-selves are not what we know as matter or things. Rather, the former are only 'one constituent of the complex unity which we call matter. Matter also essentially includes the qualification of the independent not-self by the content of sense-experience' (Stout 1905, 163). What we are therefore directly aware of are not physical things, but 'actual existences' that go into constituting physical things. It is interesting to notice how similar Stout's notion of actual existences or independent not-selves are to Russell's 'sensibilia'. The only real difference is that for Stout there is still an intermediary psychical existent, an immediate experience or presentation, between the subject and these actual existences. Otherwise, actual existences are meant to play the same role as the British New Realist's notion of 'physical appearances' and Russell's 'sensibilia' which are independent non-mental existences which persist and change independent of their being perceived.[88] Finally, Stout's overall argument against both Mill's and Kant's constructions is that 'the order of possible sensations is widely divergent from the order of the physical world and its processes. Consider the fluctuation of the visible appearance of a body as we approach or recede from it …' (Stout 1904, 155). It is this very problem that Russell tries to address especially in his 1914 *Our Knowledge of the External World*. Russell wishes to reconcile the 'the order of the physical world' with the order of sense-data.[89]

Unfortunately, Stout does not fully explain the details of how our knowledge of matter, self and other minds develop or how exactly they are constructed. These are, he says, 'outside my present scope'. There are other works where he discusses ideal construction, but these take a more psychological perspective. However, there are a few interesting features from these sources that may cast some more light on what an ideal constructions is and how the epistemological and psychological aspects of these constructions might be distinguished.

1.8.1 Ideal constructions in psychology and epistemology

Ideal constructions are introduced as early as 1899, in Stout's first edition of *A Manual of Psychology*. In the *Manual* he proceeds to show

how space, time, matter (or 'thinghood') and causality are ideal constructions. It is not clear what the precise procedure of construction is. But at least one thing is for sure, Stout considers ideal constructions to be an essential component of our everyday experience of the external world. Under the heading of 'Trains of Ideas', Stout deals with the continuity between images and ideas. There are two components that are said to 'determine' this continuity. One is the reproductive component, which is basically the association of ideas, and the second is the productive component, or ideal constructions.[90] This productive component is necessary for the *continuity* of the 'isolated facts of sense-perception' and 'interposes between them ideally represented links' (Stout 1899, 490). The whole motive 'which prompts and guides the process of ideal construction … [is] to clear experience from incoherence, contradiction, and ambiguity' (Stout 1899, 491). Many of these discontinuities arise from the fact that things are independent of the percipient. Take the example of a fire burning brightly in a fireplace. If we leave the room and come back to it in the morning, we find nothing but ashes in the same place where the fire was burning the night before. There is thus a disconnect between one set of sensible appearances and another set. These are then made continuous and connected through ideal constructions.

The rest of the chapter on ideal constructions, entitled 'The External World as Ideal Construction', goes about constructing space, time and the self. These constructions are mere summaries of the socio-psychological genesis of these notions. Not much is relevant in this regard here for our purposes, except to notice that this is the basic procedure of an ideal construction. One may note, however, the multiple ways in which ideal constructions are used. Stout refers to them as a 'guide to action', 'a plan of action', 'to separate and re-combine', 'verification', 'mental abstraction', 'conceptual analysis', 'ideal representations', and so on. Quickly one gets the idea that an ideal construction is a very broad term that includes many types of mental activities and abstractions.[91]

In 1913 the third edition of Stout's *Manual* came out. Many 'extensive'[92]changes were made throughout the book. In many ways the third edition of the *Manual* is a brand new work. What I am interested in is Stout's distinction between the psychological problem of the external world, and the metaphysical and epistemological problems of the external world. Stout insists that the question as to how the external world is 'really constituted' is not a psychological question. For the various answers to this question may in fact contradict ordinary thought and conduct. Instead, psychology assumes the ordinary belief in

external objects as a 'datum'. When this datum is made problematic it becomes an issue for philosophy.

What is the ordinary conception of the external world? Stout mentions three characteristics of the external world: (1) things are extended in space; (2) 'system of things' are independent of any individual who apprehends them; and (3) a unity where 'its parts are members of a whole, i.e. are all parts of one external *world*' (Stout 1913, 430). Psychology, therefore, takes all three for granted as data. It is the job of metaphysics to question the status of these three data.

Psychology is also distinguished from the 'Theory of Knowledge'. The former distinguishes the '*original* in distinction from the *acquired* meaning of sense-experience' (Stout 1913, 431). What psychology takes to be original, rather than acquired, is not open to further questioning *within* psychology – it becomes a foundational assumption of that science. It is rather the job of epistemology to ask whether what is taken as original *is really* original and not just acquired. There are at least two examples of what psychologists take to be original data. The first are the 'simplest objects'. These are complexes made up of sense-presentations, their representative function, and what they are presentations of. Stout stresses that in 'primitive consciousness' and in psychology all these are taken as one continuous experience, and are not analysed into their parts. The second thing that psychologists take to be original data are what Stout calls the 'Categories', or the 'ultimate principles of unity'.[93] The only 'psychologically tenable' alternative is to take 'Spatial Unity, Temporal Unity, Causal Unity, and the Unity of different Attributes as belonging to the same thing' as 'rudimentary forms' of 'embryo awareness.'[94] At first sight it is not clear whether or not Stout can still claim to ideally construct 'objective time' and 'conceptual space', when it seems they are presupposed in the primordial Categories. So at first it is not plain what the relationship is between these Categories and his ideal constructions. This confusion is easily set aside when one recalls the relationship between epistemology and psychology outlined above. These Categories are taken to be *original* in psychology. But when they are ideally constructed, they are dealt within epistemology, which regards them as *acquired*.

2
British New Realism
The Language of Madness

In this chapter I will use G.F. Stout's doctrine as a pivotal point from which I can examine as much of the Controversy as possible. In many ways this approach will also reflect the historical situation in which Stout played a central role in articulating his own position in response to challenges from various philosophers. I shall also examine some of the salient features of Samuel Alexander's position, which developed in counter-reaction to Stout's articulations. I will then move on in the next chapter to exploring T.P. Nunn's New Realism in light of the writings of both Alexander and Stout.

In what I have called the Controversy it was Stout's 1904 paper that prompted many important philosophers to engage and respond to his position. This back and forth between various philosophers, like Nunn, Alexander and Stout, continued well into the second decade of the twentieth century. Stout was not a New Realist at this time, but many of the points he made were later either adopted by the British New Realists, or used as points of contrast for their own claims. The articulation and the manner in which Stout framed his doctrine helped to determine the direction of both the Controversy and the early British New Realism.

The main ways in which Stout, I will argue, influenced the nascent New Realist identity and doctrine are in the following: Stout's position with regard to primary and secondary qualities influenced the New Realists, especially Nunn's very first articulation of the New Realism.[95] Stout, as we have seen, held that both primary and secondary qualities 'belong' to a thing independent of the mind, while also holding that both types of qualities are 'constituted' by their sensible appearances. The New Realists accepted both these positions. It was with regard to the nature of these sensible appearances (whether they were mental or

not), however, that they parted ways with Stout. Thus, Stout's views were important in paving the way for Nunn's and Alexander's positions, that *both* secondary and primary qualities are independent of the mind.

Throughout the Controversy, Stout defended the position that sensible appearances (or sense-presentations) are mental. As we shall see in this chapter, it was due to Stout's clear articulation of arguments in favour of such a position that it was easier to spot where he might have gone wrong, what needed to be modified or abandoned, and what were his particular assumptions. In many philosophers, such as the early British Empiricists, one finds many confusions with regard to sensible objects and sensations. Part of the problem was that some of these older Empiricist philosophers (like Locke) continuously confused a sensible object with the mental *act* of sensing. Partly due to his adherence to the act-psychology of Brentano, Stout tried to make a coherent case for the mentally dependent nature of sensible appearance in a manner that made some of his own assumptions explicit, while also avoiding some of the pitfalls of the early Empiricists. Subsequently, Stout's arguments became representative in the literature of an informed and sophisticated defence of the existence of a psychical element in our knowledge of the external world. As a result, what exactly needed to be opposed became clearer to many who wanted to oppose him.

An instance of such an assumption, which crystallizes out of the Controversy, is one Stout articulates in an argument for the mental nature of presentations. The assumption is that it is a 'contradiction' for one and the same thing to have an indefinite number of contrary qualities all inhering in the same place. This is what I will call Stout's Postulate. Both Alexander and Nunn, in their replies to Stout, overtly reject this assumption. The result is of tremendous importance to our story. Nunn acknowledges that by rejecting this assumption a demand for a new conception of 'thinghood' appears. But as well shall see in Chapter 5, Russell thinks Nunn does not go far enough in rejecting Stout's Postulate and Russell's construction of space, rests on his understanding of both Stout's Postulate and Nunn's rejection of it.

We have at least three types of realists: the old, the new and Stout's Proto-New-Realism. What it seems like, then, is that much of this Controversy is really internal to the realist program. This is significant to note because it reveals that not only were these philosophers battling idealism, but they were also trying to formulate their position in relation to other realists at the time. It will become clearer in later chapters, that Russell was coming out of this Controversy as well, and that the

same could be said about him; that is, he was not only confronting idealism, but also other realist tendencies that were dominant at the time.

Here I will first briefly outline Samuel Alexander's New Realism, and then examine some of the criticisms made by Stout of Alexander's position. These criticisms will provide a background for a better understanding of the salient features of Alexander's position. Throughout this chapter I will be stressing two main aspects of the Controversy: (1) the nature of sensible objects (whether these are mental or not); and (2) the nature of 'thing'. The 'thing' is viewed in this Controversy in many ways, by some as an inference, while for others, a construction of parts into a whole, and still for others a mere postulation. In Chapter 3 we will see that this is related to Nunn's demand for a new conception of 'thinghood'. It will be shown that it was mainly through these two aspects that New Realism, in its confrontation with Stout, influenced Russell the most. In particular, Russell's assumption throughout his work, that what is appearance is also real, to put it in the most general but appropriate (for the period) terms, was also the essential feature of Alexander and Nunn's New Realism. For this essential feature they were all, as will become apart in this study, indebted to Stout.

2.1 Stout's criticisms of Alexander

In this section I will be examining Samuel Alexander's New Realism. This doctrine is derived from two of Alexander's major publications: 'On Sensation and Images' (1910); and *The Basis of Realism* (1914). The first article was devised as a response to some criticisms made by Stout the year before in the *Proceedings of the Aristotelian Society*. Stout's criticisms, moreover, were directed against an earlier paper by Alexander from 1909. The second was a paper from 1914 presented to the British Academy and was written as a response to Bosanquet's criticisms of Alexander's 1910.[96] So the first was set in light of Stout's realistic position, which Alexander did not see as realistic enough, while the pamphlet of 1914 is set in opposition to Bosanquet's idealist position. This simple outline of the dialectic should give one the sense of how seriously Alexander's position was taken at the time. Many historians of British philosophy see his importance only in his *later* metaphysical work *Space, Time, and Deity* of 1920 (based on his Gifford Lectures of 1916–1918). This later work is certainly of vital importance. What must not be overshadowed by this significant book, however, are the early contributions Alexander made to the formation of British New Realism.

Alexander was one of the first to outline the New Realism in relation to the psychological and epistemological problems presented by Stout and some of the Idealists. His doctrine can be briefly sketched as one that takes knowledge to be a relation between a group of mental acts and their corresponding objects, which are presentations that are non-mental and even 'physical'. These physical and non-mental objects are related to the mind, then, by means of a relation that holds between any two things related in the world (such as the relation of a chair to the floor, or a tree to the man standing next to it). This is the fundamental relation that Alexander calls 'togetherness' or 'compresence', and is essential to understanding Alexander's position. The basic point is that togetherness obtains between any two things, without implying that one of the terms has to be mental. It is only that in the case of mind and object, where this relation also obtains, there is one term, which happens to be conscious, but this does not change the fundamental nature of the terms of the relation at all, nor does it change the nature of the relation itself. Unlike Stout, who thought that this relation demonstrates the *mental* nature of presentations, Alexander wishes to show how this is not what this relation determines.

I have only given the very bare bones of Alexander's doctrine. I will, however, flesh out Alexander's New Realism by first considering some of Stout's main objections to it. This way of doing things may seem repetitive at first, but by doing this I will not only be following the actual dialectic that took place between the two, but as a result I will also be showing how Alexander articulated and developed his views, on the most part, in relation to Stout. The influence is direct, but largely negative.

The title of Stout's reply is a question that sums up the issue of the dialectic: 'Are Presentations Mental or Physical? A Reply to Professor Alexander' (1909). For Stout the 'question concerns the nature of certain existents; we have to decide whether these are physical or psychical, or both or neither' (Stout 1909, 227). What are these 'certain existents'? Stout understands them to be what is 'existentially present to the mind in perceiving material things by way of sense' (Stout 1909, 227). The immediacy of such an existent is of the utmost importance.[97] Stout advances four main points and arguments against Alexander's doctrine that presentations are physical and non-mental. Except for the first, all these arguments are also reasons why presentations must be psychical, rather than non-mental. I will be numbering these, and their sub-arguments, so that it will be easier to refer to them when I am detailing both Alexander's and Nunn's responses.

(I) The first objection is an interesting one, because it attempts to discredit Alexander's method of 'descriptive analysis' as naïve. For Stout, one of the essential features of 'ordinary' sense-perceptions and scientific 'observations', is that they are unconsciously 'saturated with inferences and interpretations and suggestions … [that] involves thought which transcends what is existentially present' (Stout 1909, 228), while what is immediately experienced is not saturated in this way. Once he distinguishes these two from one another he claims that Alexander's 'plain descriptions of the facts' relies only on the plain man's view of the issue. According to Stout, however, the plain man has no need to distinguish immediate experience from observations and ordinary sense-perceptions. As a result of Alexander's reliance on the plain man's perspective he misses the real issue, which has less to do with immediate experience than the ordinary reception of the facts. 'The real question', in Stout's words, 'concerns the nature of what is existentially present to the mind in perceiving physical things. To this question common-sense can give no ready-made answer' (Stout 1909, 229). Stout therefore believes that Alexander's very approach is flawed from the start.

(IIa) Using the subject–object relation, Stout maps out the ways something can be mental. On the subject side of this relation we have mental acts, which, because they are on the subject side, Stout calls subjective. For every mental act there must be an object, which is what Stout calls a corresponding 'objective side'. Both these 'sides', however, are mental. Take some mental act on the subjective side. It is mental because if my mind were annihilated 'all that I call my attending, hoping, fearing, willing, etc., would *eo ipso* be annihilated' (Stout 1909, 230). Now each of these mental acts of attending, hoping, fearing and willing must have corresponding objects without which these would be 'meaningless'. So correspondingly we have that which is attended, that which is hoped for, that which is feared, etc. These objects are on the objective side of this relation and are called presentations. Stout now wishes to show that these are mental as well, for if my mind were annihilated these objects too would be annihilated. Therefore, presentations must be mental. This argument obviously depends on the definition of mental, which Stout proposes at the beginning of this paper: 'Psychical or mental existence will then, consist in whatever so belongs to the constitution of a mind, that change in it is *eo ipso* change in the mind, and that if the mind ceased to exist it would *eo ipso* cease to exist. Whatever does not conform to this condition is not a psychical existent' (Stout 1909, 227).

On the 'object' side of this relation, there are many kinds of presentations, but only two interest Stout: sensations and images. Sensations can be divided into two general types: 'organic sensations' and 'special sense-presentations'. Organic sensations are, according to Stout, obviously mental, because they depend entirely on being experienced. For instance, nausea, toothache, tickling, itching, fatigue, hunger, thirst, and so on are all organic sensations. Under the head of special senses are existents like sound sensations, colour sensations, touch, taste, temperature sensations, and so on. These types of sensations, however, are much more difficult to categorize, because they are often treated as properties of bodies existing and persisting independently of our awareness of them. But if the distinction between the independent quality of a thing and the sensible quality of a thing is kept in mind, then for Stout the special sensations are also obviously mental. The point here is simply that special sensations are mental, and this fact is based on the fundamental idea that an external thing must be seen as separate and independent of our sense-experiences of it.

(IIb) Moreover, Stout notes that in dreaming we immediately experience the greenness of the grass just as we do in sense-presentations. In the one case we call the immediate experience a 'dream-picture, or image', while in the other it is usually known as a 'visual appearance or visual presentation'. In both cases these presentations are mental existents. The mentality of both images and visual presentations is a common factor without which there would be no mental continuity between the two. This continuity accounts for important features like mental revival, reproduction and after-images. It is interesting to note Stout's belief that even a dream-image is an existent. This existence is not physical, because it does not have the characteristics of a physical thing, such as three-dimensionality or obeying the laws of physics. There need not be any independent quality of green in grass present during a dream-image of the quality green.

(III) Stout considers the following case: Adam has a cold sensation when he puts his hand into a bucket of water, while Brenda has a hot sensation when she puts her hand into the same bucket of water at the same time. Are we then to say that the very same thing, the water, has two 'contrary qualities' inhering in it? No, for this 'would involve a contradiction'. This is based on Stout's Postulate, which states that contrary qualities cannot inhere in one and the same thing and all in the same place. Since this is not possible, according to Stout, the only way out is to make sense-presentations mental and subjective; so that Adam's experience of a cold sensation is a distinct psychical existent from Brenda's hot sensation. '[Adam]

experiences his own sensations and not [Brenda's], however similar the sensations of [Adam] may be to those of [Brenda]' (Stout 1909, 238).

To take another example, the quality immediately experienced of green grass or a yellow buttercup may vary, according to light, distance, angle, abnormal viewing conditions, etc. But the independent quality green of the grass or the yellow of a buttercup remains the same. In other words, 'If the quality were really inherent in the body seen, a change in the one would be a change in the other' (Stout 1909, 233). This however is exactly what does not happen, *ex hypothesis*. Therefore, what changes in our perception of a thing does not form a part of its independent physical existence. Indeed, the independent qualities of green and yellow, are not existentially present at all, they are rather judged or inferred to be so from what is immediately given.[98]

(IV) Finally, Stout ends his reply to Alexander by considering one last 'difficulty … which I am inclined to regard as more serious than any other' (Stout 1909, 246). The basic objection points out the apparent failure of Alexander's claim that presentations are non-mental to account for the well-known psychological facts of retention, association and reproduction. Rather, Stout believes it is only when one takes presentations to be mental that one can give a *continuous* 'mental history' separate from physical objects, which can account for these facts. To quote Stout in full here would be beneficial:

> Hence, they [immediate experiences] may persist or be reproduced by association or otherwise. And if we also assume, as I do, that it is the essential function of immediate experience to specify and determine the direction of thought to objects transcending immediate experience, we have a fairly satisfactory theory of psychical retentiveness. But if the immediate experience in perception is part and parcel of the physical existence of perceived things, I fail to see how retentiveness is possible at all. The mind on this view is merely an activity which skips or hops from one external object to another, but its own nature remains unmodified by the external things to which it is successively directed. When it leaves one thing A and passes to another B, its previous connexion with A is entirely cut off. How, then, can it renew this connexion with A independently of actual perception by means of the senses? (Stout 1909, 246)

All these arguments are presented by Stout against Alexander's 1909 paper.[99] These arguments, therefore, are his reasons for showing that presentations must be mental, and not non-mental as Alexander thinks

they must be. In the following year Alexander presented his responses to the Aristotelian Society. But as we shall see, it was not only Alexander who tried to address these points and arguments made by Stout, Nunn too wrote a paper explicitly meant to be a response to these objections made by Stout. In the next chapter, we shall see how Nunn's paper against Stout was a powerful, clear and original response.

2.2 Alexander's response

In the next issue of *PAS* (1909–1910), Alexander wrote a lengthy response to Stout, in which he re-articulated some of the main aspects of his New Realism. In light of Stout's objections, however, Alexander also developed his position beyond what he had articulated in the initial 1909 paper.[100] This is important to point out here, because it helps to confirm Stout's influence upon Alexander. Another thing to note is Alexander's philosophical method or style is quite 'descriptive', rather than argumentative.[101] Alexander's counter-descriptions may be seen as ways of pushing our intuitions one way rather than another. In this regard, then, it will be at times difficult to reconstruct some of Alexander's arguments, instead I will have to give a descriptive sense of what he is trying to get at. These limitations will become apparent as we proceed.

My account will not be organized by Stout's four objections given above, even though I will try to deal with each of them as they come up. Rather, I will arrange this section so that we are dealing with three related questions central to Alexander's New Realism: (1) What is the nature of sensations, images and other presentations; (2) What is the Metaphysical Question; and (3) 'How … can the interpretation which is supplied by the mind be, as it is, a constituent of the [physical] object?'[102] Before we begin, however, let me say a word about Alexander's 'descriptive method', which will also thereby be a response to Stout's (I) above.

Contrary to Stout's understanding, Alexander claims that his descriptive method does not merely describe common-sense, and actually agrees with Stout's contention that philosophical problems, such as what is the nature of the most immediate elements in experience and their relation to the external world, are not problems for common-sense. Stout's misunderstanding might arise, Alexander thinks, from the fact that he confuses the New Realism with 'naïve realism.' These ought not to be confused, however, because, naïve realism assumes without evidence, and merely postulates, that there is an external thing of which we are directly conscious (as we saw in the case of Cook Wilson). That is, naïve realism simply 'postulates' an external thing,

without ever making an attempt to justify such a posit. In Alexander's New Realism what is most fundamental is the simple and plain experience of a relation obtaining between the mind and its object. As we shall see, this object is something like Stout's presentation, and not the thing of which it is a part. This relation is exactly the same that holds between just about any two things in the world, like the relation between a tree to grass, or a chair to the floor. On the other hand, as soon as one describes this situation as being one of dependence, where one term in the relation is dependent upon the other, one has introduced theory, or inference, says Alexander. Using the descriptive method one instead must '[s]teadily exclude traditional or untraditional philosophical notions, and you find nothing but the togetherness of the two existents mentioned' (Alexander 1910, 3). And to call this common-sense 'is to have failed in stripping oneself sufficiently of customary learning'. One of the fundamental consequences of his method is Alexander's doctrine that presentations are 'physical' or non-mental, this is as far from common-sense as one can get. A plain man would never admit to images (whether visual or dream) being physical. Certainly, then, this is not the 'language of common-sense', but rather is more akin to the '*language of madness*' (Alexander 1910, 17; my italics).

2.2.1 The nature of sensations, images and other presentations

In sense-experience only mental acts, such as conation and attention, are mental. Whether these are the only two mental acts, as Alexander contends, is something I will not address here. What is of importance, however, is the fact that Alexander explicitly denies that there is another aspect, such as a presentation, which is also mental. Rather, sensations, percepts, images, thoughts 'and the rest are different partial appearances of non-mental objects' (Alexander 1910, 29). These partial appearances of non-mental objects are also non-mental. Alexander describes them as physical appearances of physical things.[103]

For many philosophers at the time such a doctrine made little sense due to the belief that partial appearances are not real but mental. This belief rests on the assumption that what is partial falsifies – only the whole is real. A part, which is isolated from the whole of which it is a part, will have a different character than when it is a part of that whole. Alexander explicitly denies this internal view of relations: 'Connection with a larger whole does not necessarily remove the characters which a thing possesses before entrance into the whole … But so understood it remains in the whole, just what it is when taken by itself…' (Alexander

1910, 34–35).[104] Thus, these appearances are partial and 'incomplete',[105] but are, nevertheless, real and non-mental. Notice, however, how like Stout, Alexander considers these appearances as 'fragmentary' parts of a more complete whole.

How do non-mental partial appearances of a physical thing relate to the mind? Every non-mental object which is related to the mind must have a corresponding mental act.[106] The mind then has non-mental objects 'revealed'[107] to it. In each act of 'revelation' the mind reacts or is provoked into some sort of mental action or other, depending on the object being revealed. In the case of non-mental objects like images, for example, the mental act provoked into activity is the imagination or memory. In the case of thoughts, thinking is provoked into activity. These modes of consciousness, or mental acts, are thus passive in a certain sense.[108]

In Alexander's doctrine much rests on the idea that the mind and external objects are related in the same way any two physical or non-mental things are related, except that in this case one term in the relation happens to be mental or conscious. This latter fact makes no difference to the type of relation involved, or to the terms involved. As seen, the character of one term has no impact on the relation with or on the other term(s) and this is another way of denying the doctrine of internal relations. This general relation Alexander terms 'togetherness' or 'compresence', by which he means 'copartnership in one universe', and not the 'coexistence in time with the act of apprehension' (Alexander 1910, 15).[109] Just as there might be a causal relationship between any two physical things that are compresent, one can also further understand an analogous relation between the mind and its object. This scheme, thus, has two cases: one in which a change can be attributed to the mind and not the thing; and a case in which a change can be attributed to the thing and not the mind. The first case involves situations in which 'individuals with different senses apprehend differently. The sensum revealed is still non-mental, but it is only to the appropriate sense-organization that it is revealed without defect or error' (Alexander 1910, 9). An example would be a situation in which for one hand the same basin of water feels hot, while for another hand it feels cold. Here Alexander explicitly rejects Stout's Postulate (IIIb above), when he says, 'the water not only is *felt* but *is* hotter to one hand and colder to the other, and this is the only meaning of the supposed contradiction, which is no contradiction' (Alexander 1910, 9).[110] In other words, what is sensed in both cases is just as real and non-mental as the other – the cold and

the hot felt are both sensations that are related to the mental act of sensing.

The second causal case occurs 'where difference in the appearance arises from change in the situation of the stimulus [the external object] without necessarily carrying with it error. Such are the cases of the stick bent in water, the intersection of parallel lines at a distance … Here the visual characters of the object are altered by the conditions which surround it. [Unlike the first case] There is no disturbing affection of the perceiving organ' (Alexander 1910, 10–11). The case of a straight stick appearing bent in water, is an instance of an object being altered by conditions which surround it, because the stick must be partially immersed in water for it to appear bent. Again, in this case the two distinct and seemingly contrary appearances are both real and non-mental. What appears bent in sensation is an appearance of something non-mental, and the same goes for the appearance of a straight-sensation of the *very same stick*. Both are veritable sensations of the same thing. Illusion arises only when we deny, says Alexander, that the bent appearance and the straight appearance both belong to the same stick.

In both cases what Alexander seems to be addressing is Stout's emphasis on the distinction between an independent quality of a thing and its existentially present quality in the mind. One of the fundamental points that distinguishes these philosophers from one another is Stout's claim that what changes in our experience of a thing does not necessarily form a change in a part of a thing's independent physical existence. Alexander, to the contrary, thinks no distinction is necessary to account for the way we experience the qualities of a thing. Whether it is the case of the water with two seemingly contrary temperatures or the case of the stick bent in water, what we are presented with are the qualities of a thing that are independent and compresent to the mind. A certain possibility opens up, then, if one denies the distinction between what is an independent property of a thing and its corresponding sensational quality in the mind, namely, that whatever object one is mentally conscious of in any act of the mind is an object as a *part* of the physical thing. Whatever is a sensible object is simply *a part* of the independent quality of a thing, or what Alexander calls, the 'object of thought'. It is for this reason that Alexander thinks a better distinction than sensible object and objects of thought should be formulated as 'the partial element of the whole from the whole as content from object' (Alexander 1914, 15). Just as we distinguish between content and object, so must we distinguish between the partial element from the whole of which it is a part. This way of seeing the distinction between content and object, one different from Stout's,

is supposed to show, again intuitively, how it is not at all necessary that the content of an act be mental. In particular, just because the sensible object is a part of a whole to which it may belong, does not make it something 'less than and of a different order from the thing'.[111] For Alexander this means the part is no less physical than the thing.

Against Stout's argument (IIb) above, Alexander urges that even images in a dream are physical and non-mental. This is not to say that the act of dreaming is physical, but it is the dream-image which is physical. According to Alexander, physical is anything that has 'physical properties', and continues to explain this point in relation to the dream-image case Stout advances: 'One physical property is to be in space. The dream appearance is in the dream space and that space is the space which we live in, but seen in a dream. Dreams are full of illusion, and so far they are not true and are not verifiable. But in the dream space bodies do move and attract inversely as the square of the distance, so far as they are dreamt of as doing …' (Alexander 1910, 17). However awkwardly Alexander expresses this point, what is interesting is the way in which, to show how independent qualities of things are distinguished from the existentially present qualities in immediate experience, Stout takes 'dream-pictures' to be psychical existents in the exact same way in which visual-images are supposed to be psychical existents. What Alexander seems to accomplish is the exact opposite: dream-images are exactly like 'sensa' or perceptions, in that they are both non-mental or physical existents revealed to a mental act. In the next section we will see some of the implications of this view, especially in relation to understanding what he calls a metaphysical problem.

Before we move on to the next section, however, I would like to point out one important aspect of Alexander's doctrine, especially in relation to Stout and others. In many ways, as should already be evident, Alexander's position is the extreme opposite of Stout's. So when Alexander stresses the 'physical' nature of presentations, he does this not only to express his opposition to Stout, but also to emphasize the complete objectivity and public nature of these presentations. This is not only a doctrine developed to be the polar opposite of Stout's, but it is, in this way, a little more drastic than Russell's and Nunn's views. So for instance, Alexander claims that two persons may actually, under certain constraints, share *identical* sense-data.[112] Russell rejects this claim. Indeed, a lot rests on Russell's emphatic denial that two people can share sense-data. There is also the fact that Alexander, like Nunn, believes presentations to be completely independent of any mind.[113] In this way, both Nunn and Alexander articulated what Russell was later to call 'unsensed sensibilia'. In some ways, then, Russell will be shown to have developed a position somewhere in between

Stout and Alexander. Indeed, I will try to show just how much of what is original in Russell's account of sensible objects is due to this fact.

2.2.2 What is the metaphysical problem?

Alexander believes that one of the ways in which his position may be distinguished from Old Realism is by the fact that he does not merely 'postulate' a thing, that is, he does not simply posit a thing as present in each and every sensible-presentation. Rather, what our mental acts have a direct relation to are physical appearances. Thus a metaphysical problem can be formulated by asking: instead of assuming or postulating the constant presence of a thing, how could one solve the problem of the external world if one were to rather assume the absence of a thing from our direct experience? Or, as Alexander puts it, 'thought as distinguished from the mental act of thinking it, is also non-mental, but it is different from the mere image as such. I suppose that it is this which is really at the root of the controversy between Mr. Stout and myself, and makes us seem to be at cross-purposes. *I think of a thing in its absence*. There then arises the question referred to, how can I image, or think, … objects in their absence?' (Alexander 1910, 14; my italics). In this passage, when Alexander says he thinks of a thing in its 'absence' he means to suggest that he thinks of a thing *as if* it were not present, and treats it as if it were something not known directly to awareness. The answer to this question, however, will be explored in the next section, rather than in this one. This is because the question is also intimately related to the issues of that section, and a lot more background work still needs to be established before we attempt an answer. Instead, in order to further understand this important passage, I will briefly try to understand the emphasis Alexander places on the image, for it is precisely due to Stout's reliance on a biased understanding of an image that we arrive at certain 'prejudices' that affect the way we understand other presentations.

Images, unlike sensa are often experienced in the absence of the thing. The mental acts of remembering or imagining are mental, while what are remembered or imagined (that is, the image) are non-mental and physical. 'In calling it external, or physical, I mean that it has the characteristics of physical objects' (Alexander 1910, 13). This may seem 'paradoxical', but Alexander argues that it seems so only because it is based on the prejudice of 'naturally' regarding images as mental. We usually begin with this prejudice, and then go on to treat other presentations, such as sensa and thoughts as mental. Rather, suggests Alexander, 'if we begin as I do with perception [instead], we analyse it into the togetherness of the mind and some non-mental thing or object

which is revealed to the mind' (Alexander 1910, 14). If we begin with the nature of perception instead, we will be in a better position to understand that an image, like a percept, is just another sort of object to which a mind has the relation of compresence. In imagination, memory, or even in dream, we are related to an object which is, in this analysis, also external. In the case of perception we are related to an object, like a percept of a table. In the case of imagining we are related to an object, which is the image of a table. In both cases, it may be that we are related to the very same table. The only difference between the two cases, however, is that in perception or sensation the mental action has been 'evoked' directly by the object revealed, while in imagining it might be evoked indirectly, or by our 'own mental actions',[114] or 'by a process of association, [or] … by some chemical stimulus'.[115] However this may be, the image and the percept are therefore closely related (both are sensible objects or presentations). The following is an important passage in understanding not only this close relationship, but also the nature of verification and the continuity of our experience (which will play an important role in the next section).

> Imagination is continuous with perception and grows out of it. The image and the percept are the same contents, or, as I prefer to say, the same objects appearing in different forms. The one is physical in the same sense as the other. Hence the image of memory or imagination is tested or verified by reference to the percept. There is good reason for the preeminent use of sensory objects as standards. For in sensation the object acts directly upon our bodies. But if it is true that images are continuous with sensation it is no less true that sensation is continuous with images. For sensory experience is enlarged by imagination and anticipated by it. It is in this interplay between sensation and idea that the distinction of images and perceptions becomes established. Both to sensation and to imagination, objects are revealed as objects with certain characters. But when images fail to be verified they are distinguished as being only images. And it is in this way that we come to correct one part of our experience by another; and to acquire a body of truth, by the use, on the one hand of successful dealing with sensible objects, and, on the other hand, of the thwarting of personal or preconceived expectations by contact with sensory fact. (Alexander 1910, 17–18)

Whether these are percepts, concepts (as in thinking), or images, we are related to these appearances as objects external to us. The

all-important point of this section is that it becomes an acute problem for Alexander as to how a physical thing is then properly introduced and known only through its immediate and directly known parts. The solution is that a thing is a 'synthesis' of various parts, such as percepts, images, concepts, and so on. This, as we shall see in the next section, is supposed to be a procedure, which obeys the 'laws of construction'.

Before we move on to the next section, it may be of some interest, at this point, to understand what Alexander might mean by the following remark against naïve realism. He says, that if naïve realism 'means that the independent existence of physical things is postulated or assumed', then the '*postulation* of the independent objectivity of things is the evasion of a problem, by way of escape from the belief that all we know is ideas' (Alexander 1914, 8; my italics). The postulation of a thing simply evades the problem of the external world, especially if the problem is construed in the following way: if what is immediately given and directly known in the sense-experience of the world is either a psychical element (Stout) or only a non-mental part of the physical world (Alexander), how then can one know that which is not given immediately, such as physical things, matter and other minds? How can we 'escape' mere ideas or appearances to what is beyond them?[116] Some types of realism, however, simply posit physical things as already given, and they deny that physical things are not given immediately (as in direct realism). For this type of realism, there is no problem then of connecting presentations to physical things.[117]

2.2.3 'How … can the interpretation which is supplied by the mind be, as it is, a constituent of the [physical] object?'

Stout regards argument (IV) as the most important objection against Alexander. It is the question of how, on Alexander's 'hypothesis, can he give any intelligible account of the admitted facts of retentiveness, association, and reproduction' (Stout 1909, 246). We are now in a position to see how Alexander attempts to tackle this challenge. As we have seen above, the act of imagining is different in at least one way from the act of sensing, even though both their respective objects are non-mental. The difference is that the former may be 'provoked not by the object itself [the image] but internally by some mental, that is cerebral, excitement' 'No difficulty', continues Alexander, 'is now offered by the association of ideas, which might otherwise be unintelligible' (Alexander 1910, 18).

Why does this account pose no difficulties? There are at least two factors in getting to know the world: one is the 'direct action' of objects outside our mental acts, and the other is our 'own mental actions which bring us face to face with things not-ourselves' (Alexander 1910, 18–19). Association, which is a brand of the 'all-pervasive principle of interpretation', is a type of this latter factor in our knowledge of the external world. It should be kept in mind, however, that these two factors are not strictly independent of one another, they are part of a complex and sophisticated 'interplay' between the world and the mind. That these interpretations come from us does not mean they cannot be a part of the physical constituent of a thing. For the mind is passive, and non-mental presentations provide the material and impetus for such mental actions. In a fascinating passage, Alexander sums up this account by saying that these 'interpretations come from us, but they form part of the object itself. The *meanings* of things are not merely something which we entertain … *they are part of the constitution of the things* and we act on that understanding' (Alexander 1910, 19; my italics). What is interesting here for my purposes is Alexander's understanding of the 'synthesis' of a thing.

A position like Stout's, where mental presentations have been disqualified from being continuous with physical things,[118] is biased by the assumption that whatever is permanent in our experience of a thing must be a non-mental constituent of thing. From this point of view, what Alexander appears to do is make presentations physical, because they are independent, and persistent.[119] There is a difference, however, between presentations and qualities. This is expressed by calling presentations 'characters' and not qualities of a thing. In other words, for Alexander the simplest element are sensible objects (or more generally presentations), which 'are isolated acts in which the permanent qualities express themselves' (Alexander 1910, 32). In a certain sense then, presentations go into making up qualities, both primary and secondary. This is best understood if we take Alexander in his own words here:

> … extension and motion or material substance are in themselves on the same immediate footing as colours and smells; that they, too, are *made up* of sensa and percepta and thoughts, and exhibit the same problem of presenting these features in their combinations. If sensations are thus the elementary activities in the 'life' of a physical thing, percepts represent their more permanent habits in action upon a body to which or to show mind they are revealed; images are these same habits as acting in the past or projected in anticipation

> into the future, or revealed with or without distortion by foreign elements; while thought is the law of combination of qualities and of their action. (Alexander 1910, 32; italics mine)

Part of the reason that Alexander wishes to make presentations constitutive of qualities, is to preserve the universal nature of the latter and the particularity of the former. Both these, the universal qualities and the particulars which go into constituting them, are then used to constitute things. I believe Alexander does this so as to keep the particulars at some remove from things so that he can then also distinguish things, as wholes, from their parts.

Based on Stout's doctrine that both primary and secondary qualities are on the same footing, Alexander believes that both these kinds of qualities are 'made up' of non-mental presentations. Both qualities and presentations have a physical (non-mental) existence, which can be straightforwardly constitutive of physical things. It must always be kept in mind that 'it is always external materials that are being handled' (Alexander 1910, 20). It is this fundamental point that allows Alexander then to construct 'things', or wholes from their parts. Put differently, it is partly due to the insistence of a thing's parts being *mental*, as in Stout, that makes it so difficult to *construct* out of them a *physical* thing. From Alexander's point of view, Stout can only *infer* things from mental presentations. This is partly due to an assumption one constantly comes across in the works of Stout, Alexander and Nunn, namely, inferences are meant to go from one type of existent (mental) to another (physical).

Also notice that in the above quotation, it is not only sensations that are partial appearances of a thing, but that *thought* also is a non-mental appearance of a physical thing. This is significant, because Alexander wants to maintain the continuity between sensible objects and thought. For without the 'law [of construction] sensations or perceptual qualities would be isolated and incoherent. Without sensation law would be without pungency, it would not sting, it would not be realised in the direct action of thing on thing' (Alexander 1910, 32–33).[120] Such a continuity points to an important similarity between Alexander and Stout. According to Stout, one of the main problems in Kant's construction of matter was his divorce between content and existence. This is why Stout introduces actual non-mental existents ('independent not-selves') that are supposed to be immediately related to psychical elements in experience. Instead, Alexander proposes to discard psychical elements, such as mental presentations, as superfluous.

A physical thing is 'expressed' in different ways by various kinds of physical or non-mental appearances. Through these various non-mental appearances, we are related to the same physical thing. Some of the most important of these non-mental appearances for our construction of physical things are images and thoughts. Indeed, thought is the 'most important' (Alexander 1910, 26) of the non-mental presentations, and it takes 'in as it does the whole range of a thing's existence, and comprehending, let me add, the existence of many things of the same species (which obey the same law of construction or action), possesses in the constitution of things a far greater significance than sense' (Alexander 1910, 33). Thoughts are identified with the 'law[s] of construction of the object, to which the percepts and images must conform' (Alexander 1910, 31). These 'laws of construction' or 'combination' are thus also non-mental and external. They are 'as much actual realities as the parts themselves, and they are more important' (Alexander 1910, 26).[121]

Furthermore, it 'is particularly the work of thought to take the scattered appearances of things, whether in my own experience or in the experiences of several individuals, and use them so as to connect them into a whole, or better, so as to gain the vision of the whole. The particular appearances remain true, *but thought discovers their unifying and explaining law*' (Alexander 1910, 22; my italics). I take this to mean the following: parts, if they are to form a combination of a particular type of whole (rather than another), must be unified in that particular way (rather than another). What secures this unity, rather than another, for Alexander, is thought or the laws of construction.

Elsewhere, Alexander even identifies his notion of thought with Plato's ideas – both are constructive of things, but yet external and independent of the mind (Alexander 1910, 33).[122] What is not clear, however, is whether thoughts are parts that go into making up a certain whole, like a physical thing. If thoughts are so understood, then it is hard to see how something that is a part of a whole can also determine the very form and unity of that whole. Whatever this unity is, we shall see, it is an essential aspect of both Nunn's and Russell's constructions. Indeed the latter two make this unity a matter of relations. So instead of saying that thought or the laws of construction are non-mental, they rather suggest that relations are non-mental. In this way Alexander seems to be limited by the terminology and the doctrines of psychologism.

Finally, what is important to notice is that for Alexander both the partial presentations of a thing (such as images, sensations, percepts, etc.) and thoughts are 'characters' or 'appearances' or 'aspects' of a physical

thing. As such they are both 'equally real' and non-mental. Alexander is thus able to achieve a continuity and natural connection between these seemingly disparate presentations of one and the same thing (at least in the sense that they are of the same kind of thing). The sensory and the 'ideational' are connected because they both equally form various non-mental partial aspects of one physical thing. Alexander summarizes nicely when he says: 'It is, we have seen, because in our various mental actions we are handling or are in view of the same physical object that we are able to connect sensory and ideational appearances of things, experiences which are themselves physical, though all partial, into one connected and continuous whole which we call the thing whose appearances are thus revealed' (Alexander 1910, 21).

All these 'partial appearances' or 'parts' are then connected into a whole which is called the physical thing. Alexander even goes as far as to call ideas 'physical appearances' of a physical thing.[123] Be this as it may, generally, then, we have a relation of part and whole that is presented by Alexander as the nature of a physical thing. The mind is related to each of the parts and to the whole, sometimes together and other times separately, according to activity, or need. In whatever way the mind is related to any of these it is a relation of compresence, or togetherness. The parts are continuous with the whole just as much as they are continuous with one another, even when their natures seem to be quite distinct (as in sensation and thought). What is unique about this position is that these incomplete parts are existent, real, non-mental, and physical, just as is the whole.[124] It is possible for these parts to combine to form a whole because of their shared continuous histories as physical or non-mental objects. If the parts were psychical, or unreal in some fashion or other, this continuity and shared history with physical things would rupture the inherent possibility of such a combination.

2.3 Some general remarks

In conclusion allow me to make a few remarks. Generally speaking, both Stout and Alexander adhere to Brentanian act-psychology. Instead of making the content mental, however, the British New Realists make this content non-mental.[125] This distinction for the New Realists is then basically expressible by the following tripartite distinction: mental act, non-mental content, and physical thing. Whereas in the Brentanian tradition the content was a part of a mental act, here the non-mental content becomes a part of a thing. I have throughout this chapter used 'presentation', in line with Stout's terminology, for that which the

mental act is most directly related to in its intentionality. This way of putting it includes both the mental and non-mental aspects. This is important, for as I hope to show in Chapter 4, sense-data are really an extension of these very disputes and traditions.

As we have seen in relation to Dawes Hicks, for Stout the content is not a part or an aspect of the mental act, but an existent in its own right. This point Stout shared with Alexander and Russell. It was Stout's efforts in showing how presentations can be psychical existents in their own right, apart from mere aspects or products of mental acts, that really paved the way for Alexander, Nunn and Russell. It was partly this insistence by Stout that made it plausible to argue that content should be independent of the mind all together. In some ways, this insistence by Stout is what led many, ironically, to regard his psychical existents as superfluous. While the New Realists understood such content to be non-mental, they also, along with Stout and Russell, regarded sensible objects to be real, even if just appearances. But making sensible objects non-mental is thus not a complete rejection of 'content' or 'presentations', but only a modification of their nature. The very notion of 'sense-data' should be understood in this light. In Chapter 4 I hope to explore how Russell is in line with the New Realist categorization of sensible objects as non-mental, and with Stout's insistence on the real and separate existence of content from mental acts and physical things.

A word, here, in conclusion, about 'things' in this doctrine. Alexander wants to construct, as he says, common everyday 'things'. He even speaks about the 'laws of construction' that must be obeyed in every 'synthesis' of a thing. What exactly is the nature and procedure of such a construction? In his 1910 paper he makes no explicit remarks in this regard. What one may gather, however, from this paper is that his notion of construction is similar to Stout's ideal construction. Stout's problem was that he first had to infer (in some sense based on the representative function of presentations) that there are actual non-mental existents. Then based upon these 'actual existents' he thought he could construct a physical thing.

Alexander avoids the first step in Stout's move towards construction: he does not need to 'infer' non-mental data, for he is already directly related to them. But as he says in his later paper of 1914, the 'synthesis of qualities' and thereby the construction of things, 'is revealed in the thing by repeated and diverse expressions is no artificial combination, but already contained in the thing, and merely discovered by increasing knowledge, not invented by it' (Alexander 1914, 19). He wants to show that a certain combination of particulars are already present in the

physical thing. The problem with this is that Alexander already postulates a thing here as having certain features that we can only be acquainted with if we had direct and immediate experience with them, and this is exactly the posit he wishes to avoid in his realism. So if a 'thing' is a combination of mere 'repeated and diverse experiences', then it seems we have more of a psychological explanation of construction. Consider his clearest statement about such a construction or synthesis:

> To the mental acts of sensing, perceiving, imagining, thinking, correspond in the object, sensa (sense-data), percepts, images, concepts; all independent of the mind though related to it in togetherness, owing to it their percipi but not their esse. These objects … are selections from a completer object which is discovered by the synthesis of many experiences. When I have the visual objects 'brown' 'square' before me, I do not see the table, but only when by repeated experience I have connected these objects into a unity with 'solidity' and 'wooden' and the rest; so that when I now perceive the table, that object is revealed to me in perceiving as the total of its constituents. In common speech, a thing means at least the continuum of its qualities; and until we know what a quality ultimately is, we cannot say more. We can thus distinguish the partial 'object' from the complete 'thing.' But when we describe the partial object in terms of the complete thing, we are not saying what it is to acquaintance but speaking about it. The most incomplete objects are the objects of sensing. (Alexander 1914, 14–15)

This passage is the perfect summation of Alexander's view of a 'thing'. Instead of getting into the details of this passage, let me make a few remarks with regard to it. Here he speaks of a thing as a 'synthesis of many experiences', 'repeated experience', a 'total of its constituents', and a 'continuum of its qualities'. The first two descriptions of a thing, as experiences is, again, psychological. I say this because the only way to understand what he can mean by 'repeated experience' is to connect it to the genesis or the development of this notion in experience. This as we saw in the case of Stout's ideal constructions, is really the way in which a notion of the 'thing' is formed through a combination of pragmatic, socio-psychological and theoretical purposes for our survival and everyday needs. In many ways, then, as was quite common at the time, metaphysics, epistemology and psychology are all conflated. Alexander's doctrine of a 'thing' is a perfect example of this conflation.

3
British New Realism
The Language of Common-Sense

In the 1910 volume of *PAS*, Alexander's was not the only response to Stout's 1909. We also find T.P. Nunn's reply to Stout's objections to Alexander. This reply by Nunn was positioned directly against Stout's 1904 and 1909 papers, and served not only as a defence of Alexander's New Realism, but also as an independent articulation of the British New Realism. Nunn's paper was read as a part of a symposium, along with a response from F.C.S. Schiller. I will not be examining Schiller's thoughts on the question, rather I will attempt to briefly outline some of the salient features of Nunn's paper.

It is sometimes acknowledged that Nunn was quite influential on Russell's work from this period.[126] But Nunn's paper is important for other reasons as well. First, it seems that both Alexander and Nunn developed similar brands of British New Realism independent of one another. Nunn notes this fact in a footnote and claims that his ideas go as far back as 1906, when he first read a paper entitled 'The Aims and Achievements of Scientific Method' to the Aristotelian Society. Alexander developed his doctrine of New Realism a little later, in his 1909. Passmore correctly claims, therefore, that the 'first, in England, to formulate the characteristic doctrines of the New Realism was T.P. Nunn'.[127] The founding of this realism independently by both Alexander and Nunn was a motive, rather than an obstacle, for their intimate alliance. This fact is amply demonstrated by their life-long friendship and frequent correspondence. It is really quite remarkable how closely they worked together in developing the British New Realism. Secondly, one of the most important reasons for bringing up Nunn in this regard is the way in which he articulates the New Realist position; it is an extremely clear presentation,[128] especially when compared to Alexander's descriptive approach. Finally, Nunn's 1910 paper expresses

the importance of having a 'widened' notion of 'thing'. As we shall see in the fifth chapter, this demand for a wider notion of thing is related to certain interesting differences between Russell's and Nunn's respective approaches to construction. The demand for a widened notion of a thing is also related to another significant point, rich with implications; namely a certain 'theory of perspectives'. Allow me then to begin by giving a brief introduction to first Nunn himself, and then his New Realism, especially in relation to Stout.

3.1 T.P. Nunn and the New Realism

T.P. Nunn wrote little by way of philosophy. His main philosophical book was published in 1907 with the title: *The Aims and Achievements of Scientific Method*.[129] As Nunn admits in the Preface, this book was quite heavily influenced by Bertrand Russell and G.E. Moore.[130] The little he did write in philosophy, however, had an impact on those around him. Mathematical education, however, was his main area of research, which he taught at the University of London. Nunn was quite distinguished in his field, so much so, that he was knighted in 1930, and was also made the President of the Mathematical Association in London from 1917 to 1919. One of Nunn's most influential works was his 1914 treatise on *Teaching of Algebra including Trigonometry*. This three volume work was the basis of many mathematical textbooks at the time and later. His *Education, its Data and First Principles*, published in 1920, was regarded as a 'masterpiece' by many. He died in 1944, about two hours after he finished reading the proofs for the second edition of this book.[131]

In this section I will focus on one of Nunn's most important articles, presented to the Aristotelian Society in 1910. Nunn begins this paper by presenting and contrasting the main philosophical points of view with regard to the question: 'Are Secondary Qualities Independent of Perception?' The first view presented is that of Locke, who thought that secondary qualities were subjective and dependent on perception, while primary qualities actually inhered in a thing and were independent of being experienced. The second view presented is that of Berkeley, who makes both primary and secondary qualities subjective and dependent on perception. The third view is Stout's, in which we have an attempted reconciliation between the first two views. Like Berkeley, Stout believes that our 'simple ideas' of both primary and secondary qualities are psychical, but like Locke he also believes these are correlated to extra-mental realities. These extra-mental realities are physical existents and as such 'include the secondary equally with the primary attributes

of matter, which are in each case '"correlated but not identical with intrinsic characters of sensation"' (Nunn 1910, 192). What all three of these views have in common is that they all take some form of psychical element as being fundamental to knowledge.

Nunn goes on to contrast his position to these three as being a fourth possible alternative. This fourth alternative maintains: (1) primary and secondary qualities 'are really in them [things], whether any one's senses perceive them or no'; (2) that these qualities exist as they are perceived; and finally '(3) that sensations as mental entities exercising a "representative function" need not, therefore, be postulated' (Nunn 1910, 193); or in other words, the psychical element common to all of the above three positions is rejected. Nunn goes on to examine in some detail Stout's arguments for psychical elements.

As we already saw above in (IIa), Stout thought 'organic sensations', such as pain, were obviously subjective. Nunn begins by claiming that it is not obvious that pain is subjective and dependent on our experience for its existence. There are cases in which I may be in pain, but because I am occupied with something else, I may not even be aware of this pain. Nunn urges that Stout does not offer any justification for his claims about the mental nature of pain or other organic sensations. Nor does Nunn find any argument in Stout against the idea that an organic sensation, like the pain of a toothache, is something 'extra-mental'. Nunn's strategy is then to make it plausible to assert otherwise. 'In the first place', says Nunn, 'the painfulness of a toothache may present itself as a thing *to be reckoned with* as much as St. Paul's Cathedral…' (Nunn 1910, 195). From such a relation we may 'deduce' that the pain is extra-mental in the same way St. Paul's Cathedral is, and that my mind can be related to the pain in many various ways, just as I can be variously related to St. Paul's Cathedral.[132] In both cases 'I am no more bound to suppose that the pain is snuffed out of being when I cease to feel it than I am to suppose that St. Paul's is annihilated when I cease to see it' (Nunn 1910, 196).[133] Nunn concludes that presentations in general are not only non-mental, but as such, are characterized, just as all physical things are, as enduring and persisting in their existence, without them being dependent upon any percipient. Indeed, Nunn, like Alexander and Stout, makes it one of the essential characteristics of any physical object that it endure and persist in the absence of any percipient. If presentations are physical objects, then they too must have this characteristic. As we shall see later, this was one of the main points of contention between Nunn and Russell.

In an earlier book of 1907,[134] Nunn makes clear the general idea on which such an understanding is based. The main idea of this realism is summed up when he says:

> The essence of the doctrine is the view that a large part of the contents of our consciousness from moment to moment consists of elements which exhibit themselves as having a certain unique 'priority' to our conscious processes. These elements constitute what I have described as the Objective. They fall into three well marked genera – physical existents, psychical existents, and subsistents, which share with the former characteristics of being regarded as 'the same for all', and of having a certain relevance to human purposes, expressed by saying that 'they have to be reckoned with'. (Nunn 1907, 142)[135]

Anything that can be an object of human inquiry or experience, it seems then, can be an Objective.[136] With regard to what has being, Nunn contrasts his Objective with Meinong's *Objektiv* and *Objekt* distinction.[137] Nunn's notion is much broader than Meinong's, and not only includes *Objekte*, which exist and/or subsist (this depending on whether you are Russell or Meinong), but also includes 'all true *Objektive*', which only subsist.[138] Thus, relations, concepts, sensa and percepts, etc., are all kinds of Objectives. In many ways this view is similar to Alexander's, except that the latter is bound by Stout's terminology. Instead of calling these 'presentations', which are either 'non-mental' or 'physical', Nunn simply dubs them 'Objective'. This is better in some ways. For one, it impedes possible confusion, so for instance, as already noticed, at times it is not clear whether Alexander wants to merely reformulate the nature of presentations, or whether he wishes to reject them altogether. There are also some drawbacks to Nunn's terminology. It is not clear, for example, if Nunn would regard his 'sensational *data*',[139] an Objective element, to be a psychical or a physical existent. This is the case at least for his earlier work. But when Nunn later challenges Stout, he explicitly regards these as non-mental. This might be one reason why he never used the term 'Objective' again in his later works on the subject, for it seems to blur the distinction between elements which are mental and those which are not.[140]

With regard to Stout's argument, given above in (IIa), for the psychical nature of the 'special senses', Nunn believes it rests on a faulty assumption. Nunn reconstructs Stout's argument as follows: 'A hot body yields different sensations of hotness at different distances; a buttercup gives different colour sensations when viewed by the margin of the

retina instead of the centre … But these differences do not imply changes in the hot body or in the buttercup. The sensations must, therefore, be psychical entities which exist only in being experienced' (Nunn 1910, 197). The faulty assumption in this argument is, in Nunn's words: 'that the hot body cannot at the same time own all the hotnesses that can be experienced around it, nor the buttercup at different times the various colour qualities that may be "existentially present to consciousness when some one observes it." Of this proposition, as of the proposition that pains exist only in being experienced, I venture to say that it is not self-evident …' (Nunn 1910, 197).[141] I called this assumption 'Stout's Postulate', and I will now refer to the contrary as 'Nunn's Postulate'. This latter postulate states that a thing actually 'owns' all the qualities that may be offered to sense-experience under different circumstances and conditions. So in the case of the same bowl of water feeling hot to one hand and cold to another, both these qualities are a part of one and the same thing in the very same place. 'There is no difficulty in the case of the water which appears warm to A and cold to B. To me it seems true, not only that both the warmth and the coldness are really experienced, but also that, under the appropriate conditions, both are *there to be experienced* (Nunn 1910, 208).[142] And where Stout sees a 'contradiction', when two 'contrary' qualities are attributed to one and the same thing, Nunn like Alexander sees no such 'contradiction'.

Another way of putting the point is to say that Stout succumbs to the temptation of giving reality to one datum and not to another. When it is said of a penny that 'it *looks* elliptical, but it is *really* circular', or that a bucket of water 'is *really* cold when it *feels* hot to a hand', we are identifying what is real with what is given under normal and standard conditions of perception. Nunn's concern here is that there is no substantive reason for picking out only one quality from a whole series of different qualities of a thing as being the 'real' quality of a thing. Any such attempt is to be regarded as arbitrary.[143] Being arbitrarily picked out, however, is not in itself a bad thing, it is only harmful when it is confused with being the 'real' condition of a thing. To be sure, the 'real' quality of a thing picked out of an indefinite series of qualities is only of pragmatic interest, and is merely 'a symbol for the totality of the experiences of hotness and coldness obtainable from the water at the moment in question, each under its proper conditions of perception' (Nunn 1910, 208). Nunn believes such pragmatic symbols of economy, which we constantly employ in everyday life, are really constructions of the 'actual' or 'real' state of a thing. The 'real' state of a thing, in this sense then, is known only indirectly, through construction. What we

know directly, however, are the various indefinite qualities that all inhere in one and the same thing. What we are directly aware of, then, is this indefinite series of qualities.

Nunn's 'all-important point is that we cannot deny to the qualities perceived [whether they are primary or secondary] the Objectivity, the "priority" to our perception that they claim to have in each case…' (Nunn 1907, 14).[144] In relation to Stout, Nunn points out that one of the aspects of sensible objects that realism is concerned with is 'the further truth which sensation "reveals" as its own extra-mental existence. For Mr. Stout the further truth is the existence of an extra-mental reality correlated but *not* identical with the sensational quality' (Nunn 1910, 201).[145] It is in this way that what is given in sense-experience is something 'to be reckoned with'.

3.2 Nunn and things

One of the features that results from Nunn's Postulate is a demand for a new concept of 'thing'. Nunn believes that many purported solutions to the problem of the external world are riddled with confusion and error precisely because of a limited notion of 'thing'. In this section I am going to explain this demand, especially in light of Nunn's notion of hypothesis and construction. Another result of Nunn's Postulate is an implicit 'theory of perspectives'. Both these aspects are important parts of Nunn's doctrine, and both later either influenced the direction Russell took in his logical constructions of the external world or helped to set Russell's method apart from Nunn's underlying assumptions.

The consequences of Nunn's Postulate coupled with his belief in the extra-mental nature of presentations can be demonstrated using two 'difficult cases'. The first runs as follows: Take a very large semi-circle, and imagine that placed all along its circumference are a number of people standing stationary. A car moves at a constant speed on the diameter of this semi-circle with a constant blow of its whistle (remember this is a motor car from the early 1900s!). Each person on the circumference will hear a different note as the car passes, while for the passengers of the car a constant note will be heard. 'Are we to maintain', asks Nunn, 'that all these diverse notes are being simultaneously "emitted" by the whistle?' (Nunn 1910, 204). On the one hand, Stout would answer in the negative. This case would then provide further support for the psychical nature of presentations, because there is no other plausible way to account for the sense-experience of a multitude of contrary notes in light of the fact that the whistle can *really* only emit

one constant note. On the other hand, Nunn, having rejected Stout's Postulate, must bite the bullet and answer 'Yes' to the question. This is exactly what he says:

> I believe that we can and must answer Yes. The experience of hearing a note seems to me to contain as part of itself the announcement that the note is extra-mental – that it is, so to speak, *there to be heard*. Since this is true of each of the notes – none of which presents itself with a certificate of superiority over the others – I accept the conclusion that the creation of this multiplicity of notes to be heard is part of the phenomenon which is called blowing the whistle. (Nunn 1910, 204)

The second 'difficult case' Nunn considers is one where we have a body with a high temperature. But from various distances, for different people, and depending on the conditions of one's perceiving sense-organs, this body will have many perceived temperatures. All these temperatures must belong to the one and the same thing. 'Not only must the thing be thought of as owning an indefinite number of hotnesses disposed spatially about it', Nunn explains, 'it must also be recognised that the disposition of these hotnesses depends in part upon the hotnesses belonging at every moment to neighbouring bodies' (Nunn 1910, 206–7).

There are two points that arise as a result of such 'difficult cases'. Both points are essential in understanding the way in which not only Nunn, but also Alexander, influenced Russell. The first point is not brought out explicitly in the 1910 text, but is a consequence of Nunn's view, namely, the notion of 'private spaces'.[146] This notion, or what Nunn also later called a 'theory of perspectives', is a natural outcome of taking seriously the many different sensible particulars available to various percipients of one and the same thing. Each percipient experiences a certain quality of a thing that may not necessarily be identical to another percipient's sensible experience of the same thing. One thing this assumes is the possibility of various *perspectives* that are possible around a thing. These various perspectives may be understood as many private spaces, each containing its own distinct set of qualities. We speak of a 'space' because we usually deal with not just one isolated quality of a thing, but a whole 'nexus' of relations between various qualities of a thing.

Later in his 1916 response to both Moore and Stout, Nunn confirms that a theory of perspectives, is a 'necessary completion of my own theory of perception'. Nunn further explains that he 'did not bring it

into [the] paper of 1910 partly because the scope of the paper was perforce limited, but chiefly because I had not the wit to conceive it as Mr. Russell has since done' (Nunn 1916, 161). Russell conceived the fullest consequences of this theory of perspectives in his 1914 paper, 'The Relation of Sense-Data to Physics'. It is interesting that there Russell actually bases his very important distinction between the place *at* which something appears and the place *from* which it appears, on Nunn's 1910 article, and especially on Nunn's explicit rejection of Stout's Postulate.[147]

A second related point arises from Nunn's Postulate and the 'difficult cases' considered, and that is the demand for a wider notion of 'thinghood'. 'All these [difficult] cases', says Nunn, *'are really in equal need of the application of the wider concept of the "thing" '* (Nunn 1910, 206; my italics). Nunn provides a few ways in which the concept of thinghood may be widened. Thinghood, 'or [the] real extra-mental nexus that unites the sensational qualities', needs to be widened and extended from the 'plain man's' view.[148] This is accomplished by means of a few conditions that must be met by a wider notion of 'thing', which are novel, and others, proverbial. I am able to find at least five different requirements, some related, others not:[149] (1) The thing must be thought of as 'owning' an indefinite number of presentational qualities at the 'same place at the same time'; (2) The disposition of these qualities also depends in some fashion on neighbouring things;[150] (3) 'a thing must not be thought of as limited by a precise spatial boundary. It may be necessary to think of it as filling an indefinite part of the material universe' (Nunn 1910, 206); (4) the change in the visual (or any presentational) character of a thing is equally a change in the thing;[151] and (5) a thing may have characters or presentational qualities that actually occupy different parts of the same space at the same time.[152] I will not here examine each of these five conditions, mainly because of considerations of space. However, my discussion below will touch on some aspects of some of these five conditions.

What, then, is Nunn's notion of a thing? For Nunn a thing is an Objective and the sensa and concepts that go into making up a thing are also individual Objectives. This is a whole–part relation, in that the Objective parts go into making up an Objective whole, which is the thing. The very idea of the whole–part relation, or any relation for that matter, is also an Objective. In many ways this is similar to Alexander; both adopt Stout's position that primary and secondary qualities inhere in a thing, and as such, are non-mental parts that go into making up a thing.[153] The following quotation by Alexander echoes exactly Nunn's

doctrine: 'In all this labour of expression the mind is still handling outside objects, using the materials of its experience and building them into a new structure of art or science. Whether some totally new feature of things may thus be discovered is a question which I need not raise for fear of accumulating difficulties. But it is always external materials that are being handled, and the new product itself, whether it is a statue, or a poem, or a thought, also external and presented from without' (Alexander 1910, 20). Alexander is reluctant, however, in dealing with the possible 'new feature of things'. Though Nunn tries to point out the ways in which there might be a need for a wider notion of thing, he says, however, a lot less than the reader would like. In any case, Nunn's own words are worth quoting in full here:

> The view which is held without suspicion upon the plane of common sense can be saved upon the plane of metaphysical reflexion only by the recognition of the Objectivity that has already been claimed for at least some relations. *If that claim be admitted it becomes possible to regard a whole which is a complex of elements in relation to one another as having Objectivity apart from the fact of the Objectivity of its parts*. The 'melody' which is heard from a succession of notes is played upon a musical instrument is such a whole; it consists of the notes in definite Objective relations and has to be 'heard' as a presentation *distinct from* [my italics] though based upon, the presentations of the single notes. [reference is made to Russell's review in *Mind* N.S. No. 56 p. 537] … It is necessary only to point out that by the admission of the possible Objectivity of a whole *as a distinct entity* subsisting *as well as* its parts and their relations, the Objectivity which common-sense finds in the Thing, apart from individual qualities, can be conceded by the philosopher. The Thing 'has' its qualities just as a melody has its notes. (Nunn 1907, 17–18)

This passage is extremely important. Throughout it becomes explicit that one of the things Nunn is aiming at preserving is the idea that behind a collection of sensible qualities there is a thing which is a separate *unity distinct from* them. This, in Nunn's view, is saving a 'view held without suspicion' in common-sense within the metaphysical plane. Whether Nunn coherently demonstrates that the whole as a thing is distinct from its parts, is here besides the point. What needs to be made clear is what Nunn is expressly trying to achieve, namely, a certain common-sense view of substance, as something distinct and as sustaining non-mental appearances.

Like a symphony or a melody, a thing is distinct from its parts, even though the parts, like the notes, go into making up a thing.[154] What is essential to such an analogy is the fact that if all the particular notes were exactly the same, but arranged differently, that is, put into different *relations* with one another, there would be a different melody. A different melody would not result, however, if they are played by a different instrument. If the relations between the notes are the same, then we have the same melody or symphony. The notes are not relations, nor are relations particular notes. Yet we have a *form* that unites the whole and the parts in the particular way that it does. Nunn says, this relation (or this unifying form) itself is Objective, that is, something to be discovered, or found among a collection of notes. This is meant to show how the conception of a thing as a substance, or something more than merely a collection of its parts, is possible on the plane of metaphysics. I stress this because certain historians have styled Nunn a phenomenalist. Passmore, for example, sums up Nunn's doctrine by saying that the latter's 'realism, at this point, is very like Ernst Mach's phenomenalism' (Passmore 1966, 261). Mach's phenomenalism, however, is fundamentally based on neutral stuff, neither physical nor mental, which are collected and *identified* with things.[155] Apart from the fact that Nunn's doctrine is not so based, there is also another difference. For Mach there is no distinct thing or substance, apart from its sensational qualities. But for Nunn, as the above passage shows, there certainly is such a distinct and independent thing. Related to the significance of this latter point, there is a further incisive reason outlined by Nunn as to why he is not a phenomenalist. This point will lead us to the heart of Nunn's small book of 1907. Nunn makes the following comments about his position compared to Mach:

> If pressed to consider also the case of thinghood, I should have first to remark that I find between concepts of this order and the concepts of Science a distinct break. In this I differ from Mach, who does not appear to distinguish the process by which we supply a core to a mass of sensations, and so create a 'thing' from the process by which we make a secondary construction out of certain *data* by means of the concept of a transference of something ('energy') that remains constant in amount. … According to this thought Reality is not the same after our judgment as before; it is 'increased and elevated' by the act of judgment. The implication seems to be that scientific judgments simply continue a process which 'common-sense' judgments begin … But, as I have already pointed out, 'the secondary

> constructions' of Science which correspond to the 'reality qualified by an ideal content' of the ordinary judgment contain no element that is not drawn from the common-sense stratum of consciousness. For example, if one body is cooling while another is simultaneously growing warmer, the secondary construction in which these primary facts are synthesised contains besides these facts merely the thought of another *thing* being transferred from one body to the other. *On the other hand, the synthesis by which we bind the various qualities into the 'thing' does not present us with anything analogous to this. The secondary construction is of a totally different character from the elements; the process does not reach its end by the ideal addition of a new element of the same type.* (Nunn 1907, 136–37; my italics)

The fundamental point in this passage is that unlike Mach, Nunn tries to avoid what he considers an illegitimate conflation between two different types of 'secondary constructions'. In order to understand the significance of this passage, allow me to briefly outline Nunn's main thesis in this book, especially with regard to the nature of scientific hypothesis.

In all knowledge of the external world, there are two broad elements involved: inevitable or primary synthesis or constructions, and non-inevitable or secondary constructions. Primary constructions are what 'mankind everywhere would make from the same sensational data'. These are ordinary things (a pot, water, fire and potatoes) that inevitably arise from a respective body of parts; that is, it seems they cannot but be so construed (due perhaps to psychology and the way humans are hardwired).[156] Nunn gives an example taken from Darwin's *Voyage of the 'Beagle'*, to emphasize the types of constructions involved: 'The scientific traveller on a high plateau of the Andes and his native guides view in different ways the impossibility of getting their potatoes to cook.'[157] The phenomenon described here may be explained in different ways. On the one hand, using concepts such as air pressure, molecules and boiling points, one way of explaining this result is scientifically. On the other hand, for the Andes guides involved, says Nunn, 'the impossibility is due to the simple fact that "the cursed pot", doubtless owing to the devil in it, "did not wish to cook potatoes" '.[158] The scientific explanation, therefore, is one possible secondary construction of the phenomena, involving the given primary constructions of facts. It introduces certain features that are not present in the bare primary synthesis, but are used to explain and make intelligible certain occurrences involving the primary facts.

Consequently, Nunn thinks that secondary constructions are not inevitable because there will always be more than one possible explanation, (animists may attribute the result in the above example to spirits). Whatever the case may be, Nunn says that by 'adopting this distinction we may say that the scientific process is one out of several possible alternative processes by means of which primary facts may be submitted to further construction; and it will be recognised as true that the object of this secondary synthesis is to make the primary facts *intelligible*' (Nunn 1907, 47). This is a simplified account of Nunn's notion of scientific hypothesis, but he goes on to show the many different ways in which the simple idea of a secondary construction or synthesis has been used, from Newton's introduction of gravity to electricity, throughout scientific history. Due to space limitations, I am going to leave out the details of this account.[159]

Especially with regard to understanding what Nunn says about his relation to Mach above, the central point here, however, is that after examining a whole array of cases in the history of science, Nunn concludes that there are three different types of secondary constructions, all of which have been erroneously lumped under the heading of 'hypothesis':[160] (1) Certain 'data', says Nunn, which 'form an incomplete spatio-temporal system of a familiar type' is supplemented by 'additional elements of the same order' to make it 'complete'. For example, Nunn considers the case of a detective who adds certain elements to make the primary facts of a crime scene (clues) complete and intelligible. The additional elements added to the primary facts are of the same order; that is, they belong to the same category of being as the primary facts, and these elements must also be verifiable.[161] (2) The added elements are not spatio-temporal existences, like the fragmentary primary data, but are the *relations* between such data. The essential aspect of this type of construction is that the added elements are not of the 'same order' as the primary data – though the primary facts in need of completion are spatio-temporal existences, relations are not. Gravity, introduced as a relation by Newton between two material bodies, is an example of this type of construction. (3) There are three characteristics of this last kind of construction: (i) there is a lack of homogeneity between the primary data and the added elements; (ii) added elements are unverifiable; and (iii) 'that the secondary construction does not merely *complete* the *data* but actually replaces them' (Nunn 1907, 130).[162] The example given is that of molecules. Nunn thinks this third sort is not a valid type of secondary construction for science, because, as he establishes earlier on in this small book,

proper scientific hypotheses do not *replace* the data but only *complete* them.[163]

Aside from the difficulties this account presents, such as the proper place of molecules in science for Nunn, which I will not attempt to explore here, there are two important points to be noted. The first is that we can now make sense of what Nunn says in relation to Mach. What Nunn is trying to show is that there are actually two distinct ways in which 'things' may be constructed. There is first the way in which a thing is constructed in science, this *should* correspond to (1) and (2) above. But then there is also the metaphysical construction of a 'thing', and this corresponds to the third type of construction. To conflate these, according to Nunn, is really to unduly introduce metaphysics into science, which is precisely the confusion in Mach's phenomenalism. Thus, Nunn says above: 'the synthesis by which we bind the various qualities into the "thing" does not present us with anything analogous to this. *The secondary construction is of a totally different character from the elements*; the process does not reach its end by the ideal addition of a new element of the same type' (Nunn 1907, 137; my italics). If one takes 'things' to be secondary constructions, in the metaphysical sense of (3), then this passage is an attempt to preserve the notion of a thing as *distinct* from its appearances (primary data), because what is added to make the primary data intelligible is an element 'totally different'.[164] This is supposed to be unlike Mach, because for him things are like any other scientific hypothesis, but in this case, the added elements are of the 'same order' as the primary data. If phenomenalism is typified by its denial of there being any difference between a thing and its parts, then here Nunn is not a phenomenalist.

Before moving on to the next point, I would like to briefly point out that it is not very clear whether or not Nunn is a phenomenalist in his 1910 response to Stout. This is partly unclear because of the polemical nature of that paper – it is mainly composed as a negative piece.[165] But even in this paper, Nunn does allude to the fact that his conception of the various types of hypothesis may actually play a role in explaining certain problems like illusion.[166] In his 1910 paper I see no sign that he might have come to reject the three types of construction. It might then be safe to conjecture that his conception of a 'thing', then, as a secondary construction of type (3), has not changed. I wish also to point out, however, that the only actual characterization of a 'thing' he gives in his 1910 is to call it a 'real extra-mental nexus that unites the sensational qualities'. Given the polemical and purely negative nature of his 1910 paper and this characterization of a thing

here, it is no wonder that some regard Nunn a phenomenalist. Finally in Nunn's 1916 paper, however, he takes one of Moore's characterizations of a certain possible position as actually characterizing his own doctrine. This doctrine is described as one in which 'the "source" [thing] is not an "existence beyond" the visual sense-data, but includes the whole collection of such "sensibles" as could be directly apprehended by perceiving subjects under different conditions' (Nunn 1916, 159). It may now seem that Nunn is almost indistinguishable from the phenomenalist,[167] but if he still maintains a realism about relations, as he most certainly does, and a belief that physical elements are those that persist without a perceiver, so central to his views, then it seems he definitely is still not to be lumped so easily with the phenomenalists.

3.3 Nunn's Postulate

Nunn saw himself as defending common-sense against certain philosophical doctrines. Admittedly, there are also aspects of his doctrine which seem to fly in the face of common-sense; for instance, contrary qualities all in the same place at the same time; and qualities which do not seem to reside in the same 'place' as that of the thing and its other qualities.[168] But these, in Nunn's doctrine, are further, no reason to think of qualities as psychical existents.

A further assumption, which seems to run counter to common-sense, according to Nunn, is Stout's claim that in the change or variation of sensible-presentations there may be no corresponding change or variation in the real thing. This is premised on the idea that there are many appearances of a thing, but only a few actually corresponding to a thing's 'real' qualities and conditions. Along with Stout's Postulate[169] this amounts to saying that a thing, in 'reality,' can only have a unique, definite and non-contrary set of qualities; for whatever is indefinite and in possession of many contrary qualities, must be appearance and not reality. This latter assumption is related to the traditional notion of a substance.[170] This is confirmed by Bradley, in his *Appearance and Reality*, when tracing the distinction between primary and secondary qualities back to the 'foundation of this view'; he says we 'assume that a thing must be *self-consistent* and self-dependent. *It either has a quality or has not got it.* And, if it has it, it cannot have it only sometimes, and merely in this or that relation. But such a principle is the condemnation of secondary qualities' (Bradley 1897, 9; my italics). This is certainly correct with regard to Locke's distinction between the primary and secondary

qualities. Locke thinks one of the main reasons for distinguishing between these two different kinds of qualities is to account for cases where there are contrary qualities experienced. With this distinction, that is, 'we may be able to give an Account, how the same Water, at the same time, may produce the *Idea* of cold by one Hand, and of Heat by the other: Whereas it is impossible, that the same Water, if those *Ideas* were really in it, should at the same time be both Hot and Cold' (Locke 1690, Bk II, Ch. VII, §21, p. 58).[171] Even more interestingly, this same reasoning also leads to the condemnation of the primary qualities by Berkeley. In *Dialogue I* Philonous reminds Hylas:

> **Philonous:** … if you will venture to think as freely concerning this [primary] quality [of distance], as you have done concerning the rest. Was it not admitted as a good argument, that neither heat nor cold was in the water, because it seemed warm to one hand, and cold to the other?
>
> **Hylas:** It was.
>
> **Philonous:** Is it not the very same reasoning to conclude, there is no extension or figure in an object, because to one eye it shall seem little, smooth, and round, when at the same time it appears to the other great, uneven, and angular?[172]

Cleary, then, Stout's Postulate has a long history, deeply rooted within the British Empiricist tradition. Nunn's rejection of it is therefore no small matter.[173] But it opens the door to an interesting realist position. One way that I have characterized this realist position is to stress one of the consequences of Nunn's Postulate, namely, the demand for the new conception of 'thinghood'. But as the rejection of the traditional assumption of Stout's Postulate indicates, Nunn seems to be also showing the limitations of the substance-attribute distinction in metaphysics. In many ways the demand for a new conception of 'thinghood' is also a demand for a new conception of substance, one that accommodates the five requirements listed above. Unfortunately, nowhere does Nunn actually go into the details of such a positive doctrine. One thing, however, can be said with regard to such a doctrine: it seems the conception would have to go on to deny that a substance is in and of itself unknowable and inaccessible. As we saw in the previous section, this is simply because, like a melody or a symphony, we can know all of its parts, the whole, and the way in which they are all related in a unity. There is nothing about the substance, in this case, which can be distinct from all its parts and that relates them all in a certain way

that is unknown or inaccessible.[174] The whole is distinct from the parts, but not unknowable.

Stout's sharp distinction between sensible qualities and those qualities that inhere in a thing, rests on a particular understanding of substance. As Hermann Lotze, who looms large in the background of Stouts work, observes, 'The more necessary the distinction in consequence becomes between the thing itself and its changeable modes of appearances, the more *pressing* becomes the question, what it is that constitutes the thing itself, in abstraction from its properties.'[175] In some ways Stout may be seen as the one who inadvertently opened the gates in England to a new conception of a thing. Not only through his strict separation did the concept of thing become 'pressing', but also through the idea that both primary and secondary qualities inhere in a thing independent of the way they might appear to the mind. It is no wonder then that Nunn at first wholly agreed with Stout's 1904 paper.

Two things that distinguish Stout and Nunn, finally, is Stout's insistence on psychical existents called presentations, and his Postulate. These two distinguishing features are related in that it is partly due to his Postulate that Stout believes he is justified in making presentations psychical entities. These two features also make for a reality much less populated than that of Nunn's. As Nunn polemically remarks, 'Under its influence [Stout's doctrine] we are concerned at the enormous number of qualities with which [New] Realism would endow the commonest body. By supposing these qualities to enjoy only a temporary existence in the mind of an observer we seem to effect a great economy of material and to clear Nature of the suspicion of reckless prodigality' (Nunn 1910, 200). But Nunn's Postulate claims that this 'great economy' is a also a great epistemological mistake. As a matter of fact, we will see how Russell actually connects this 'reckless prodigality' to a proper understanding of space, as a logical construction, able to accommodate the vast array of entities made possible by such a realism.

4
Russell and the Nature of Sense-Data

In the first three chapters I have tried to outline three *related* points in connection with the Controversy. The first point was with regard to the way in which Stout not only played a central and influential role in the development of this Controversy, but also in the very articulation of his adversaries' doctrines, and thereby, in the formation of the British New Realism. The second point I tried to disentangle was the respective ways the three philosophers discussed so far tried to solve the problem of the external world. And finally, the third point, extensively discussed, was the nature of sensible objects, whether they were mental or non-mental. Especially in relation to Bertrand Russell and the notion of sense-data, it will be this last point that I will now focus on.

Broadly speaking, the primary aim of this chapter will be to place Russell's notion of sense-data, and more generally, 'sensibilia', within the historical and philosophical context provided by the last three chapters. It will be found that these notions do have a deep connection to many of the themes already discussed in relation to the Controversy. This is not to deny the influential role G.E. Moore played in the development of sense-data in Russell's thought – this is a well-known fact. There are, however, elements surrounding the idea of sense-data that I hope to show are directly related to Stout's Brentanian heritage, and to certain doctrinal aspects of Alexander and Nunn. One such element is the emphasis Russell places on a sense-datum's 'existence', and thereby siding with Stout and Alexander against Cook Wilson and Dawes Hicks. Another important element that I will elaborate in this chapter is the nature of the broader category of sensible objects Russell calls 'sensibilia', which not only include sense-data, but also all *unsensed* sense-data that are not data to any percipient. Many commentators have expressed their wonder with regard to Russell's, albeit hesitant,

acceptance of these sensibilia. But as we shall see, Russell was rather much more cautious in this regard than those who had similar notions, such as Stout, Alexander and Nunn. Surprisingly, Russell's hesitant use of these entities is really a conservative utilization of what others felt justified and unabashed in employing. Finally, in this chapter I will outline some changes that took place with regard to sense-data and their connection to physical things, between Russell's 1912 *Problems of Philosophy* (hereafter *PP*) and his 1914 book *Our Knowledge of the External World*.[176] In between these two books is a work that is fundamental to this development: an unpublished article from 1912 entitled 'On Matter' (hereafter *OM*). Russell here actually ends up being sympathetic to some of Nunn's unique views. There are some significant developments that take place between *PP* and the shorter articles of 1914–1915, like those concerned with the connection between sense-data and physical things, and more generally related to the idea of a logical construction. I shall, however, delay any detailed discussion of Russell's method of logical construction until the next chapter. My primary focus in this chapter, therefore, will be the nature of sensible objects in Russell's philosophy.

This chapter will be structured in the following fashion. There are two main sections. In the first I will begin with making certain connections between Stout's Brentanian heritage and Russell a little clearer. This will result in a better understanding of Russell's and Stout's distinguishing idea of sensible objects as 'existents'. The second section will consider some further aspects of Russell's distinctive notions of sense-data and sensibilia. I will show how these notions were developed in contradistinction to some of the assumptions of the Controversy. Especially in noticing and excluding certain assumptions held by those in the Controversy, I hope to show how Russell directly tried to make certain advances in our understanding of these sensible objects. This will help to highlight ways in which Russell set himself apart from the views, with regard to sensible objects, of not only Stout but also Alexander and Nunn. I hope to make clear in this chapter, that this was a direct engagement on the part of Russell with the Controversy.

4.1 Russell and Stout on sensible objects

Alberto Coffa makes the following passing remark: 'Brentano's writings must be apportioned much of the blame for the sense-datum approach to epistemology.'[177] This is in many ways true not only for Russell, as Coffa contends, but also for Stout. In this section I will try to link

Russell's account of sense-data to Brentano, but this will be done through Stout. In light of what I have already established in Section 1.3 of Chapter 1, it would be more accurate to say that I will attempt to show how Russell was influenced in his 'sense-datum approach' by a distinctly British Brentanian tradition as represented not only by Stout, but also by G. Dawes Hicks. Consequently, an important outcome of this section will be a better understanding of particular things Russell says in response to Dawes Hicks' review of *PP* entitled 'The Nature of Sense-Data'. Related to this is also a minor point that I will only touch on, which is Russell's insistence on physical things being functions of sense-data, rather than sense-data being functions of physical things, as in Cook Wilson. This is connected to a particular assumption he shares with Stout against Cook Wilson's direct realism. Namely, the assumption that what is directly apprehended in sense-perception is not the physical thing itself, but rather the sensible appearances of the thing. Or in Alexander's words, the physical thing is not simply 'postulated' as being directly apprehended.

We know that it was Stout's friend and teacher James Ward who first introduced Russell to Meinong.[178] And it was Stout that early on recommended to the young Russell to write a review of Meinong for *Mind*. At least through Russell's readings of Stout's 1896 classic *Analytic Psychology*, one might also suggest that it was through Stout, his teacher in Cambridge at around the same time,[179] that Russell had first been introduced to the ideas of Brentano. Stout's work of 1896 should be regarded as one of the seminal pieces in what I have called the British Brentanian tradition. As David Bell correctly asserts, 'historically, the significance of Stout's *Analytical Psychology*, is, I think, this: it was the most accurate and detailed presentation in English of Brentano's contribution to psychology.'[180]

Stout's adherence to Brentano's work in philosophical psychology, however, was not an uncritical one. Like Twardowski, but much more emphatically, Stout felt that even though Brentano had made important advances, he did not go far enough in a few regards. For one thing Brentano's immanent object exacerbated the problem of the closed circle of ideas. That is, it made the following problem much more acute: if various mental acts are not intentionally related to external objects, but only to immanently intended objects, then there is no way one's thinking, sensing, presenting or feeling can be directly related to, or intentionally be directed towards external and 'real' objects. Stout suggests at least two related ways out for Brentano. In the first, Stout argues, like Twardowski, but independently of him, that in any mental

act we must distinguish the transcendent object from the content. 'We may,' says Stout in his 1896, '… confidently affirm that the object of thought is never a content of our finite consciousness. If the object exists at all in the sense in which the thinker refers to it, i.e., means or intends it, it exists independently of this consciousness …'[181] Or even more pertinently, Stout later, in recounting his connections to the Brentanian school in his *Analytic Psychology* says, 'I there connect my own position with that of Brentano, accepting his distinction between objects of consciousness and the modes in which consciousness refers to its object, but criticizing his failure to distinguish between "Objekt" and "Inhalt" '.[182]

The second way out of the problem, which Stout also suggests as early as 1896, is much more of an eccentric view. It is the view, recall, that gives *Inhalt*, or in Stout's terminology, 'presentation', a distinct, actual and psychical 'existence'. This is supposed to be unlike Twardowski's position, which regards *Inhalt* as a mere 'product' or 'aspect' of the mental act, instead of a separate entity. Part of the motivation for making presentations mental existents is so they may also, like all mental phenomena, have intentionality. This is what Stout calls the 'representative or presentative function' of presentations – it is, as we saw, the basis of his theory of perception and epistemology.

The two solutions, moreover, offered by Stout are related, in that the mental act is directed in its intentionality to its content or presentation. It is then the intentionality of a presentation, which is supposed to be directly and immediately related to a transcendent or external object. This is unlike Twardowski's doctrine, for whom the mental act is instead directly related, in its intentionality, to the external object, and for whom the content is only an aspect or product of the mental act, and not an 'object' to which the mental act is directed towards in its intentionality.

I will now primarily focus on the second of the two solutions offered by Stout to the problem of the closed circle of ideas. It is the claim that presentations have a separate, distinct and actual psychical existence. The consequences of this claim are starkly brought forth, as we saw in the first chapter, by its application to certain philosophical problems. One such consequence is the distinction between two different *senses* of 'appearance' that is central to Stout's doctrine. This is clearly spelled out in his important 1905 article 'Things and Sensations'. He there says, 'I have proceeded on the assumption that *the sensible appearance is itself something which appears* or is known, and I have contended that this something has an existence distinct from the material thing perceived'.[183]

This assumption is important, for Stout's very formulation of the problem depends on it: 'None the less, however intimate the unity of matter and sensible appearance, the existence of the one is not numerically identical with the existence of the other. On the contrary, we are compelled by overwhelming evidence to recognise that, in this respect, they are relatively separate and independent. The visual appearance of a thing may vary indefinitely in size, shape, and colour without any corresponding variation in the thing itself.'[184] That is, matter and sensible appearance, or presentations in general, are distinct, and need to be connected.

There is a misunderstanding that is bound to occur, according to Stout, if one does not keep the two different senses of appearance in mind. 'Now a critic may here accuse me of a twofold error,' explains Stout: 'He [the critic] may say: "In affirming the distinct existence of thing and sensible appearance, you confuse appearance in the sense of what appears or is perceived with appearance in the sense in which it merely means the fact of appearing or becoming perceived. If you insist on meaning by appearance something which appears, you are wrong in asserting the distinct existence of material thing and sensible appearance. The distinction is not a distinction between two existences. It is a distinction between the material thing as it appears imperfectly or wrongly and the same thing as it appears more fully and correctly." '[185] As we saw in the first chapter, this hypothetical critic was in fact Cook Wilson. The latter, second meaning of appearance, the one Cook Wilson mistakenly attributes to Stout, is connected to the old Empiricist notion of 'idea' as a representational element in our knowledge of the external world. This is not what Stout means. Rather he feels justified 'in regarding sensible appearances', as he puts it, 'as having an existence and a positive nature of their own, distinct from material things and their attributes, however imperfectly and erroneously these may be apprehended. *The sensible appearance is itself something that appears, and this something is not matter; it is not even matter appearing in a fragmentary and distorted way.*'[186] The reason this distinction is so important for our purposes here is that Russell explicitly saw himself as being committed to the *same sense* of appearance that Stout was.

Russell's *PP* is surprisingly similar to Stout's overall solution to the problem of the external world. The first thing to note is the emphasis Russell places on the distinction between matter and sense-data. Indeed, among other things, the argument from the variation and change of sensible objects, without there necessarily being a corresponding variation or change in the thing itself, is meant to demonstrate for

Russell, as it did for Stout, the distinction between matter and sense-data. Russell says, 'therefore, we cannot say that the table *is* the sense-data, or even that the sense-data are directly properties of the table'.[187] This conclusion also emphasizes Russell's view in *PP* that sense-data are not to be identified with the actual qualities of a thing in itself.[188] This is exactly what Stout too says above. The significance of this, however, will be revealed when we relate this point to Nunn's notion of unsensed sense-data, in the next section.

Russell also says that 'the body [in its tactile sensations] cannot be supposed to reveal *directly* any definite property of the table, but at the most to be *signs* of some property which perhaps causes all the sensations, but is not actually apparent in any of them'.[189] The general problem therefore for Russell in *PP* becomes: 'Granted that we are certain of our own sense-data, have we any reason for regarding them as signs of the existence of something else, which we can call the physical object?'[190] For both Stout and Russell the problem is one of discovering a correspondence between two *distinct entities*: sensible objects and physical things. Both regard sensible objects as 'signs' of something beyond. Both philosophers also agree that these sensible objects are what mental acts are immediately directed towards in their intentionality. Russell even defines sense-data as 'the things that are immediately known in sensation: such things as colours, sounds, smells, hardnesses, roughnesses, and so on. We shall give the name "sensation" to the experience of being immediately aware of these things. Thus, whenever we see a colour, we have a sensation *of* the colour, but the colour itself is a sense-datum, not a sensation.'[191] Both Russell and Stout, therefore, adopt Brentano's overall act-psychology.

Where Russell and Stout differ, however, is in their understanding of the nature of these 'signs'. Stout's sensible-presentations are mental existents, while Russell argues that because these 'signs' may be dependent on our bodies, this does 'not prove [them] to be mental; [this] only proves that [their] existence depends upon the relation of our sense organs to the physical object'.[192] Sense-data may also be described as 'private'. But all that means is no two percipients can ever have exactly the same sense-data at the same time, and not that they are mental.[193]

This difference points to another dissimilarity between the two philosophers. On the one hand, for Stout the connection between a sensible object and the physical thing is guaranteed by the former's representative function (or intentionality). For Russell, on the other hand, (like Nunn and Alexander) there is no such function. Rather, in

PP Russell attempts to connect sense-data, as signs, to physical things through a logical and causal correspondence – sense-data are caused by physical things and also share a logical structure with one another, and both are essentially established through a principle of continuity.

There is one more important way, however, in which Stout's sensible-presentations are akin to Russell's sense-data, a kinship best brought out by considering G. Dawes Hicks' reviews of both Stout and Russell. As already discussed, in a long article of 1906, Dawes Hicks attacks Stout's distinct sense of appearance. Dawes Hicks maintains that the category of existence is inapplicable to presentations. Rather, like Twardowski, Dawes Hicks advances the view that regards presentations as mere 'aspects' or 'products' of the mental act.[194] Six years later, in a review of Russell's *PP*, Dawes Hicks contends that there are

> two senses in which the nature of an 'appearance' as distinguished from a 'reality' may be construed. On the one hand, an appearance may be regarded as a way in which the reality is apprehended – as, in the case of a finite mind, a partial, imperfect, incomplete way in which the reality is known. So regarded, appearances will not have ascribed to them a mode of existence independent of, and separate from, the reality of which they are appearances … And it will be recognized that this very nature precludes us from conceiving of the appearances as belonging to the *ordo existendi* … On the other hand, an appearance may be regarded as itself an existent entity … In that case, the appearances, conceived as distinct and separate from the reality, will be taken themselves to constitute things, and it will be *this* thing and not the real thing that will be held to be immediately known.[195]

Dawes Hicks' basic contention is that Russell does not differentiate between these two 'radically different' senses of appearance. Russell 'does not, that is to say, definitely face the issue whether it is the real things themselves that appear, or whether it is *the appearances that appear*'.[196] Notice the way Dawes Hicks puts this distinction. It corresponds exactly, almost verbatim, with Stout's construal of his sense of appearance in 1905: '*The sensible appearance is itself something that appears*.'[197] What is fascinating about this point of correspondence is that Russell says in his response to Dawes Hicks' review: 'As a matter of fact, though I have doubtless been less clear than I ought to have been, *I have consistently held to the second of his two views* … I regard sense-data as existing quite as truly as anything, indeed I regard their *existence* as

the ultimate certainty on which all knowledge of what exists must be based.'[198] Russell is therefore in agreement with Stout's distinct sense of appearance.

What does this mean for our understanding of Russell? The acceptance of this second sense of appearance makes Russell, like Stout, averse to direct realism. As we saw in Chapter 1, Cook Wilson presents a geometric counter-example meant to demonstrate the plausibility of the first sense of appearance, that is, an appearance which is merely the appearing of the physical thing, and as such, not essential to the explanation of the apparent variation in a physical thing. All that is essential in the explanation of visual change or variation in a thing is the 'universally accepted' presupposition that 'the observer sees a point in *real* extension of a *real* object in the direction (*real*) of the line drawn from his eye in *real* space to the given point in the *real* object'.[199] This is implied, says Cook Wilson, in 'the whole geometrical theory' of 'perspectives'.[200] From this theory he concludes, that 'the diminution is no mere appearance, it is really an objective fact – it appears but it is also real – a reality here, *as* reality, appears'.[201] Cook Wilson goes on to actually make the very same distinction that Stout made earlier between the two different senses of appearance, and even systematically plots out the possible genesis of this distinction:

> If we perceive some property of an object, there is presupposed on the one hand the property of the object as existing on its own account, whether we perceive it or not; and as distinct from this, our act of perceiving or recognizing the nature of this property. This latter, the subjective act of ours, is sometimes spoken of from the side of the object as the *appearance* of the object to us. This 'appearance' then gets distinguished from the object, and that in itself in so far as our subjective act of recognition of the object's nature is not the same as that nature. But next the *appearance*, though properly the appear*ing* of the object, gets to be looked on as itself an object and the immediate object of our consciousness, and being already, as we have seen distinguished from the object and related to our subjectivity, becomes, so to say, a merely subjective 'object' – 'appearance' in that sense. And so, as *appearance* of the object, it has now to be represented not as the object but as some phenomenon caused in our consciousness by the object. Thus for the true appearance (= appearing) to us of the *object* is substituted, through the 'objectification' of the appearing as appearance, the appearing to us of an *appearance*, the appearing of a phenomenon caused in us by the object.[202]

What Cook Wilson is accusing Stout of in this letter is the making of gratuitous distinctions between a mental act and a mental presentation, and the latter from 'real' external objects. The first distinction leads to an unwarranted 'objectification' of an act of appearing, while the second distinction leads to the insurmountable gap between appearance and reality. Both these difficulties are connected by the repugnant claim, at least for Cook Wilson, that a presentation (content or appearance) cannot be anything like a physical external thing.

Cook Wilson's, and perhaps Dawes Hicks' suggestion that what actually appears is simply the physical thing, is meant to emphasize, at least partly, the direct relation between a mental act (of appearing) and the physical object, without introducing a mediatory element in between. It is precisely this suggestion that allows, for example, Cook Wilson to advocate that any illusion or apparent element of change or variation in a thing can be directly accounted for by presupposing that 'the observer sees a point in *real* extension of a *real* object in the direction (*real*) of the line drawn from his eye in *real* space to the given point in the *real* object'.[203] In contrast, however, both Stout and Russell argue that there is an element which is much more direct and immediate in our relation to physical things. This is not all though. What is important to stress here is that there is a further characteristic fundamental to this sense of appearance. Sensible appearances are really not only distinct and separate from mental acts and from physical things, but they are distinct '*existents*' as such. This emphasis in Stout, lays the path for Russell's notion of a sense-data, as being genuine *existents* in their own right.[204] To put the point a bit differently, Stout led the way for Russell's (and the British New Realist's) understanding of appearances as distinctly *real* and *existent*. Thus any argument that attempts to distinguish the 'real' object from mere appearance, as do both Cook Wilson and Dawes Hicks,[205] really miss the mark. For both Russell and Stout the physical thing *and* its sensible appearances may be regarded as '*real*' objects. The question then becomes, for this view, which 'real' object is 'given' most directly and immediately in experience? On the one hand, Stout answers: a 'psychical existent', which he calls a 'presentation'. Russell answers, on the other hand, that it is a non-mental existent called a 'sense-datum'. Both refer to these existents as appearances. Russell and Stout agree that matter or physical things are not the most immediate element in our experience of the world.

I think it is in this regard that Paul Hager's statement finds its real significance. He says, 'what this means for the appearance/reality contrast is that from the onset of his realism, Russell accorded to

appearance the same *ontological* status as reality, whilst firmly adhering to the *epistemological* primacy of appearance. This … provides the distinctive cast to Russell's realism and sets him apart from the mainstream tradition of British empiricism.'[206] Even though I derive the same point from my comparison of Russell to Stout, Hager demonstrates it by comparing Russell to Kant and some British Empiricists. There is a difference, however, between Russell and Stout, which makes Hager's remark all the more pertinent. Unlike Stout, Russell characterizes his sense-data as non-mental and even, like Alexander, 'physical'.

I believe that Russell's construal of appearance as an 'existent', is meant to distinguish, as Hager claims, his doctrine of sense-data from the Empiricist notion of 'sensations'. For one thing we know that Stout advanced this same sense of appearance in order to differentiate his doctrine from Locke's empiricism.[207] This came up when we discussed Cook Wilson's construal of Stout's theory of 'representative function' as a form of Lockean representationalism. Cook Wilson himself, at one point, describes Locke's notion of sensation as merely an 'affection of ourselves', which, therefore, could not 'subsist of itself'.[208] This is the first sense of appearance – the mere appearing of the physical thing. This straightforward similarity between Stout and Russell's shared sense of appearance, and its dissimilarities to Empiricists like Locke, is made all the more complicated, however, by Dawes Hicks' insistence that Locke held to the same sense of appearance as did Stout.[209] I do not wish to get into a discussion of which sense of appearance each Empiricist held fast to in his respective notion of 'ideas' or 'sensations'. It may just be that the Empiricists frequently conflated these two senses of appearance. If these two senses of appearance are really as 'radically different' from one another as Stout, Dawes Hicks and Russell all thought, then any conflation of the two senses was a serious matter of confusion on the part of anyone who conflated them. In the very same paragraph in which Russell commits himself to Stout's sense of appearance, Russell says that 'appearances are what are certain and primitive; the physical objects inferred and hypothetical and by no means certain … the only important point is to be clear as to the facts, namely that sense-data are presented and physical objects are not'.[210]

I will end this section with a few words about Cook Wilson's geometric counter-example and Russell. Though it is unlikely that Russell ever actually saw this letter of Cook Wilson's to Stout, we can still learn a few things which will help us distinguish Russell from the Old Realism.[211] Instead of recounting the whole counter-example, I refer the reader to

Section 1.6 of Chapter 1. The first thing to remember is that I call it a 'counter-example' because it is mainly meant to show that Stout's argument from the variation or change in the appearances of a thing, without there actually being any change or variation in the thing itself, does not demonstrate the existence of a separate and distinct psychical existent. It rather demonstrates, according to Cook Wilson, the way in which this variation can be accounted for by considering only the real thing, its real extension, and the real relations involved; and thus, without any mental presentation or appearance. It will, however, be useful to quote the following passage. Cook Wilson says here, that 'the important thing … is that the observer is supposed to be looking at the real extension of the object itself, and also that what he *sees* in so looking is definitely a part of the real extension. He is looking at the point A as the end of AB in the figure, and what he *sees* is the end of this line AB. It is most important here to keep out of one's mind all physiological and psychological theories to *account* for the way we come to do this.'[212] The conclusion from such considerations is that 'our mental attitude presupposes that we see the real extension in real space and not some *simulacrum* of it which is not in any space at all'.[213] And that such a result arises purely from geometry.[214]

As we saw, in *PP* Russell uses the same argument from variation and change in appearances, to show that sense-data are distinct from physical things. He does not use it to prove that sense-data are therefore mental. However, two points immediately arise for Russell with regard to such a counter-example. The first thing is that, from Russell's perspective, Cook Wilson seriously conflates three distinct notions of space. Russell distinguishes between physical space, the space of geometry (and logic), and psychological space.[215] The space of geometry, which Cook Wilson purports to be using, is a matter of axioms and logic. As such, there are as many geometries possible as there are consistent, independent and complete sets of axioms. In order for any of these to be applicable to physical space, their respective entities (such as points, lines, planes, etc.) must find some physical interpretation. Since there are no *geometrical* 'points', or 'lines' in physical space, we must then construct these from what is given. What is given can only be got from the elements of psychological space. Here we find that physical points or lines can be constructed using sense-data and their relations to one another in psychological space. According to Russell, therefore, one cannot begin with the assumption that there is a physical space already given. Rather, physical space, is an inference from what is given in psychological space. Thus, if by 'real extension' Cook

Wilson means a physical extension, according to Russell, this is simply a metaphysical postulate. But if by 'real extension' Cook Wilson means geometrical space, then this will lead to the same problem. For if by geometry he means applied, rather than pure, he is left with the problem of interpretation. There is no exact correspondence between a physical point, say, and a geometrical point. In order, however, for there to be a close correspondence, for the purposes of application, Russell suggests, we must first *construct* physical points out of sense-data, which have all the properties that are appropriate for such an interpretation. Here we see the fundamental primacy of sense-data, in a 'private space', over and above any 'real extension'.

The essential point is that for Russell such arguments already implicitly posit the very inferred entities in need of construction. Cook Wilson himself acknowledges that his theory 'presupposes' we are directly related to the 'real extension'.[216] In this way I think Russell would wholeheartedly agree with Alexander's claim that the direct or 'naïve realism' of the Old Realists merely 'postulated' the existence of inferred entities like physical things and physical space. Such a distinct realism rests, as Russell puts it, on 'the assumption that there can be something more real than objects of sense'.[217] The contrary assumption, namely that there is nothing more real than the objects of sense, is related to the second sense of appearance that both Stout and Russell adhered to (at least in the period under consideration). This adherence arose from Stout's study of Brentano, and it is at least in this way that I suggest Russell was influenced by the British Brentanian tradition.

This leads us to the second point that must be noted in regard to Cook Wilson's counter-example. Contrary to what Cook Wilson explicitly says above, Russell clearly thinks physiological and psychological considerations *must be* constantly considered and kept in mind in accounting for such arguments from the change and variation of appearances. As we shall see in the next section, Russell thinks that the nature of sense-data has often been misunderstood and misconstrued precisely because the repercussions of psychological and physiological research have either been misapplied or wholly ignored with respect to sense-data. The expression of the exact consequences of psychology and physiology with regard to sense-data, is therefore, an important part of Russell's project. More specifically, the relationship between psychology, physiology, physics and philosophy, are all important ways of not only understanding the nature of sense-data and 'things', but also in the very articulation of the problem itself.[218] It is partly to these issues we now turn to in the following section.

4.2 Russell, sense-data and sensibilia

In this section I will further relate Russell's notion of sense-data to the Controversy. There are primarily two aspects to this trajectory. The first relates to Russell's negative project of highlighting some of the faulty assumptions that not only Stout may have held, but also the British New Realists. Considerations related to physics, physiology, psychology and metaphysics will all play an important role in this regard for Russell. The second aspect relates to Russell's notion of sensibilia. I will attempt to trace out the various ways it was construed by Russell and others. Russell's occasional hesitation in the employment of sensibilia is one of the things that distinguished him from the New Realists and Stout.

In the preface to *PP*, Russell says he benefited greatly from G.E. Moore's 'unpublished writings'.[219] These were notes that came from a series of lectures Moore delivered at Morley College in London in the winter of 1910–1911. The lectures were first published as *Some Main Problems of Philosophy* in 1953. 'It is perhaps worth mentioning', Moore confirms, 'that Chapters I–X are the 'unpublished writings' of mine, to which Lord Russell refers in the Preface to *The Problems of Philosophy*.'[220] The second chapter of Moore's lectures is entitled 'Sense-Data', and tries to deal thoroughly with certain issues regarding sensible appearances. Here Moore defines sense-data as the 'things *given* or presented by the senses'.[221] He goes on to sharply distinguish them, in line with the act-psychology of Stout and Brentano, from mental acts like sensation. To be sure, it is plausible to allege that Moore learned this distinction from the works of Stout, especially the latter's *Analytic Psychology*.[222] In fact, I wish to claim that some of Moore's works from this period was substantially influenced by the British Brentanian tradition, *via* Stout. Substantiating this claim, however, will take us too far a field, and so I shall merely assume it as a plausible claim.[223] It was probably from these lecture notes that Russell also learned to use the term 'sense-data' for sensible objects. The earliest use of this term in Russell can be found in an article published in the 1910–1911 volume of *PAS*, and later revised and included as a chapter in *PP*, called 'Knowledge by Acquaintance and Knowledge by Description'.

A mere glance at the Controversy will reveal the confusion that may have been caused by the terminology involved in naming the objects of sense. Stout used the term 'presentations' for the mental objects of mental acts. He differentiated the objects of sensation from the objects of conception, by referring to the former as sensible-presentations, or

sensible objects. But as Twardowski notes, the term 'presentation' can be used in two other ways: to refer to the mental act, or to refer to the complete act-content-object process in distinction from, say, judgement. The German term which is usually translated into English as 'presentation' is '*Vorstellung*', and corresponds to Twardowski (and Meinong's) use, while 'presentation' in Stout's sense finds its German correlate in '*Inhalt*'. Russell, for example, preferred to use 'presentation' for '*Vorstellung*' in his reviews of Meinong. It is along these lines that Dawes Hicks dedicates a footnote, in his critique of Stout, to point out 'the baffling confusion attached to the term *Vorstellung*'. After highlighting that for the Herbartian psychologists '*Vorstellung*' meant the presented object, he says, for Brentano it meant 'exactly the opposite': the mental act.[224]

It is no wonder then that many not only accused Stout of conflating the mental act with its object, but that many who were opposed to presentations being mental were unsure what to call the resulting object; this is what we saw in Alexander for instance. In Alexander's relevant work it is quite clear that what he is rejecting is not, dare I say, a 'third thing' between the mental act and the thing, but only the proper classification of this third thing – whether it is mental or non-mental. He calls these things of this third type by various names, sometimes 'sensations', other times 'sensa' or 'percepta';[225] and even more fundamentally, 'physical appearances'. What occurs, as a result, is no particular consistent term that really distinguishes the mental acts from this third kind of thing. Nunn's 'Objective', however, as we have seen, is much too broad. It includes both the physical and psychical elements. However, Nunn does use the term 'sensational data'.[226] This is very infrequent though and not used after its first occurrence in his 1907 book. In his famous article of 1910, he uses the terms 'sensations' or 'sensational qualities' instead, but in this article he also introduces the term 'sense-data'.

I have stuck to Stout's term for this third thing ('presentation'). Even though Alexander and Nunn rarely used the term 'presentation',[227] I continue to use it in reference to their respective doctrines, but with the qualifying 'non-mental', 'physical', and 'extra-mental' adjectives. This is done for two reasons. The first reason is simply because there is no consistent term used to refer to the objects of sense, other than 'presentations.' Secondly, and more importantly, it is done so as to reveal the fact that sense-data are really a certain *type* of (non-mental) sensible-*presentations*.[228]

It may be fair to say that the term 'sense-data' as introduced by Moore, was in many ways introduced to clarify some of the confusions

enumerated above and to provide a consistent term for non-mental sensible objects.[229] There are two further points that occur. The one I will call the broad point and the second the narrow point. What I wish to stress with regard to the broad point is that the notion of 'sense-data' was *not* a brand new concept first introduced by Moore. In another sense, however, there were some distinctive features introduced into this notion by Russell that set him ingeniously and subtly apart from not only Moore but also the British New Realists. This latter is the narrow point and I will deal with it later on below. Let me say a few words about this broader point first.

In one sense, broadly speaking, sense-data are no different from sensible-presentations, for both are existents to which the mental act of sensation is most directly and immediately related in its intentionality. In making sensible-presentations existents and objects in their own right, Stout went in the direction of sense-data. And from the perspective of the New Realists, both are physical and non-mental. Therefore, what Russell inherited from Moore was not a brand new concept, but rather a new term for a concept which was quite widely used in the Controversy. Unlike the concept of a mental presentation, where confusion between the mental act and its object was still possible, it seems that the term 'sense-data' helped to maintain this distinction. Once this relationship became clear and was consistently adhered to, the real philosophical issue emerged: What is the relationship between sense-data and physical things like tables and chairs? After sense-data were made prominent by Russell, it was thus no wonder that many who participated in the Controversy readily adopted the term 'sense-data'. This fact is most conspicuous in a 'Symposium' published in *PAS* in the 1913–1914 edition entitled: 'The Status of Sense-Data'. Not only was one of Moore's talk included in this symposium, but so were the responses of both Stout and Nunn.[230]

However, when one takes into account Stout's notion of an 'independent not-self', a difficulty arises for the way I have so far stuck to the term 'presentation'. Stout introduces the 'independent not-self' in order to avoid attributing a 'conceptual order' to our knowledge of matter.[231] Matter, says Stout, 'is an actual existence, enduring, changing, acting, and being acted on. It cannot, therefore, be a conceptual order in which content is divorced from existence.'[232] As such, matter 'can only be constituted by the qualification of such actual existences by the content of sensible appearances'. These actual existences are the independent not-selves that our sensible-presentations are 'immediately' related to in our sensual experience of matter. Mental presentations are thus now

contrasted to non-mental independent not-selves, which are used to construct matter. This raises a difficulty, because instead of the New Realist senses of 'sensational qualities', 'sensational data', 'sensa', or 'physical appearances' corresponding to non-mental presentations, as I have suggested above, the former are more correctly akin to Stout's independent not-selves. Like independent not-selves, Alexander's 'physical appearances' and Nunn's 'sensational qualities' all, in the words of Stout, are 'a system of actual existences which are at least known as enduring, changing, and interacting', without being dependent on a percipient for their existence. Sensible-presentations are psychical existents that are dependent for their existence upon a percipient. The final thing to note here is that there is a difference in the *kind* of existents these things are. Presentations are mental, while independent not-selves are not.

This is not a serious difficulty though. Stout only really uses the notion of independent not-selves in the article of 1905, and is never used again in subsequent publications. In the dialectic with Alexander, Stout himself prefers to pose the question as one between mental or non-mental 'presentations'. Even though it is not such a serious difficulty, I bring it up for three reasons. The first is simply to point out the fact that there seems to be a confusion in Stout between two distinctions: (1) mental presentations and non-mental presentations; and (2) mental presentations and independent not-selves. The second distinction is different from the first because it implies that presentations are by their very definition mental, while the first does not imply this. Again, this confusion in Stout may not be too serious, because non-mental presentations may just be identified with independent not-selves. This is certainly plausible if one considers mental presentations to be superfluous, as did the New Realists. The second reason I bring this point up is because it helps to highlight another very important aspect of Alexander and Nunn's realism. Apart from the fact that 'sensa' or 'sensational qualities' are non-mental or even physical appearances, they also persist and endure independent of any percipient. Both these points are inextricably related for the New Realists. For Nunn, as we saw, the premise in Stout's argument that, for example, pain is mental because its existence depends on being apprehended, is flawed simply because pain may continue to exist without being apprehended by any mind. The final reason I bring up this difficulty is in relation to Russell. Instead of saying, as I said above that sense-data are a type of non-mental presentation, it would be more accurate to say that *sensibilia*, are really much more akin to non-mental presentations, or to Stout's independent not-self. Russell defines 'sensibilia' as 'those objects which have the same metaphysical and

physical status as sense-data, without necessarily being data to any mind'.[233] So it is in this sense that sense-data are really a *type* of sensibilia. Russell goes on to say, about this relationship, that 'the relation of a *sensibile* to a sense-datum is like that of a man to a husband: a man becomes a husband by entering into the relation of marriage, and similarly a *sensibile* becomes a sense-datum by entering into the relation of acquaintance. It is important to have both terms; for we wish to discuss whether an object which is at one time a sense-datum can still exist at a time when it is not a sense-datum.'[234]

This last point leads us now to ask about the relationship between sense-data and both Stout's mental presentations and independent not-self, and the British New Realist's notion of physical appearances. The exploration of this relationship will bring me to what I have called the narrow point. To bring out the marked differences between sense-data and the rest, let me briefly chart each respective position in the following manner: Under column (A) I will designate the view which regards sensible objects as mental. I will use column (B) to refer to the view which claims there to be some sensible element that persists without a percipient. (C) will then just designate that sensible objects are not, in the respective view, mental. And (D) will designate, finally, the view that there are sensible elements that do not persist unperceived. Then we have the following chart:

	(A) Sensible objects as mental	**(B) Sensible objects that persist without percipient**	**(C) Sensible objects not mental**	**(D) Sensible objects do not persist unperceived**
Stout: *Sensible presentations*	✘			✘
Stout: *Independent not-self*		✘	✘	
Alexander: *Physical appearances*		✘	✘	
Nunn: *Sensational qualities*		✘	✘	
Russell: *Sense-data*			✘	✘

Unlike any other sensible object in this chart, Russell's sense-data are neither mental nor do they persist without being perceived. There is much internal evidence to suggest that Russell's position was largely developed in reaction to the positions held by the others in this table.[235] The narrow point, therefore, is that I believe Russell subtly refined, in his own individual way, the notion of sensible objects as used by the others in the Controversy. It is to his arguments for holding both (C) and (D) with regard to sense-data that I now turn. One of the main outcomes of this examination will be the fact that Russell's sense-data are actually a further purification from unnecessary postulations and 'prejudices' that infect the sensible objects of others. In Russell's eyes, it will be seen, the best examples of such infections are to be found precisely in the doctrines of sensible objects expressed in the Controversy.

Stout advanced the argument that since sensible-presentations only persist when perceived and that they are therefore mental. Nunn, as we saw, rejected the idea that sensible objects only persist when perceived, and thereby concluded that they are instead non-mental. What both these arguments assume is that whether or not something is mental is inextricably linked to the question whether the same thing persists only when perceived or not. The unique thing about Russell's argument is that he rejects this basic assumption *common* to both Stout and the British New Realists. Whether something persists unchanged only when perceived or not, does not determine whether it is non-mental or not. Russell even says, quite clearly, that there are two 'errors' here that 'support each other … the first of these is the error that what we see, or perceive through any of our other senses, is subjective: the second is the belief that what is physical must be persistent'.[236] Indeed, according to Russell, there are two *separate* questions here that are 'commonly confused': '(1) Do sensible objects persist when we are not sensible of them? … And (2) are sense-data mental or physical?'[237]

Russell goes as far as to make explicit the claim that what is physical may indeed be something that only persists unchanged when perceived, and that characteristically sense-data are an instance of such physical objects. Russell says in the early part of 1914 that: 'I propose to assert that sense-data are physical, while yet maintaining that they probably never persist unchanged after ceasing to be data. The view that they do not persist is often thought, quite erroneously in my opinion, to imply that they are mental'.[238] Before I get into the arguments that Russell advances against the view that sense-data are mental, let me include here a feature of *PP* that seems to run counter to these considerations.

In *PP* Russell sharply distinguishes sense-data from their causes: physical things like chairs and tables. One of the reasons for this distinction, Russell argues, is that since sense-data are private and cease to persist unchanged when not perceived, there must be something else that does remain and does persist after sense-data are no longer sensed.[239] These must be physical things and their qualities. Although Russell does not anywhere in this little book suggest that sense-data are mental,[240] he does seem to share the assumption common to Stout and Nunn that what persists independent of being sensed is one of the characteristic features of physical things. Therefore, the view held in *PP* with regard to this assumption, is certainly one of the things assailed by the remarks quoted above from his 1914 article *RSDP*. I will further consider the implications of the distinction maintained in *PP* between sense-data and physical things later when I come to my discussion of sensibilia in Russell. Now let me continue with a look at some of Russell's views against arguments for the mental nature of sense-data.

The overall strategy Russell embarks upon in making it plausible to claim that sense-data are non-mental and physical is largely a negative one. He goes through a few arguments usually expounded by those who regard sensible objects to be mental, and shows that it does not follow from these arguments that sensible objects are really mental. In fact, all the arguments for the mental nature of sensible objects he does look at are exactly some of those that are used by Stout. One of the most notorious of such arguments, is one which supposes the necessity of positing mental presentations to account for the appearance of change in a thing, when there is really no corresponding change in the thing itself. To use Russell's example in *PP*, let us say that we have a brown table before us, it may appear white when the sun is directly reflecting off the table, or even dark in the late evening. For some observers of the same table it may appear black, while to others, at the same time, it may appear light brown. All these various colour appearances of the table cannot all belong to the same table at the same time (for one and the same person). Since they do not belong to the table itself, which is physical, Stout concludes, they must be mental presentations private to each observer's experience of the table. (In the remainder of this work I will refer to this argument as 'Stout's argument from apparent change'). Russell, however, in *PP* suggests that this conclusion does not follow. What does follow from such a case is that the 'colour is not something which is inherent in the table, but something depending upon the table and the spectator and the way the light falls on the table'.[241] Later on, in the same book, he states the

point more clearly: 'Our previous arguments concerning the colour did not prove it to be mental; they only proved that its existence depends upon the relation of our sense organs to the physical object – in our case, the table.'[242] In other words, the 'causal dependence'[243] of a sensible object upon the percipient only proves that the object is dependent on the subject's body and its sense organs, *not* that it is dependent upon the mind.[244] 'The visual appearance of an object', says Russell, 'is altered if we shut one eye, or squint, or look previously at something dazzling; but all these are bodily acts, and the alterations which they effect are to be explained by physiology and optics, not by psychology … They belong therefore to the theory of the physical world, and can have no bearing upon the question whether what we see is causally dependent upon the mind.'[245] It is in this sense, then, that Russell regards sense-data as '*physiologically subjective*' and not mental.[246] As such, sense-data are to be regarded, says Russell, as 'among the ultimate constituents of the physical world'.[247]

What *is* mental in our sensual experience of the external world is our awareness of sense-data. Sense-data are related to the mental act of sensation and it is this latter that is really mental in our sensible experiences. Mental acts are the subject-matter of psychology. Russell repeatedly affirms, every mental act must have an object, but Stout actually uses this relation between a mental act and its object, to imply that the corresponding object must also be mental. This is another argument for mental presentations used by Stout against Alexander.[248] Russell, however, answers this argument by correctly noting that it does not follow that the object of every mental act must also be mental,[249] that instead, any such argument merely confuses what is a mental act with its sensible object.

Russell concludes a lecture delivered to the *Philosophical Society* of Manchester on February 1915[250] by saying: 'But in so far as the view that sense-data are "mental" rests upon physiology, psychology, or metaphysics, I have tried to show it rests upon confusions and prejudices – prejudices in favour of permanence in the ultimate constituents of matter, and confusion derived from unduly simple notions of space, from the causal correlation of sense-data with sense-organs, and from failures to distinguish between sense-data and sensations.'[251] The last two confusions noted in this passage, the causal correlation of sense-data with sense-organs and the failure to distinguish between sense-data and sensations, are, as I have mentioned, the two confusions Stout commits. The first was a matter of physiology, while the other a matter of psychology. The 'prejudice in favour of permanence', as we have seen, is a

prejudice common to both Stout and the British New Realists. Finally, as I will show in the next chapter, the last confusion, the 'unduly simple' conception of space, is more specifically directed towards the British New Realists.

As to the point about sense-data persisting unchanged only in the moments of awareness, Russell's only real argument for this claim is connected to his notion of acquaintance. Acquaintance is a 'knowledge of things' and is distinguished from the 'knowledge of truths'. One way Russell distinguishes these two types of knowledge is by claiming that acquaintance is a relation which we have with a thing when 'we are directly aware, without intermediary of any process of inference'.[252] While knowledge of truths, or what he also calls 'descriptions', is a type of knowledge which involves an intermediary 'process' of inference, and thus is an indirect form of knowledge, sense-data are things that 'supply the most obvious and striking example of knowledge by acquaintance'.[253] 'Thus', says Russell, 'in the presence of my table I am acquainted with the sense-data that make up the appearance of my table – its colour, shape, hardness, smoothness, etc.; all these are things of which I am immediately conscious when I am seeing and touching my table … I know the colour perfectly and completely when I see it, and no further knowledge of it itself is even theoretically possible. Thus the sense-data which make up the appearance of my table are things with which I have acquaintance, things immediately known to me just as they are.'[254] When Russell says that 'I know the colour perfectly and completely' and that sense-data are known to him 'just as they are', he is alluding to another distinction between acquaintance and description. That is, in the relation of acquaintance there is no possibility of error, while in knowledge by description such a possibility is a live one. Another way of putting it is to say that the bivalent element of truth and falsity is only applicable to cases of knowledge by description, and it is as such that we regard this latter type of knowledge propositional. Knowledge of things, or acquaintance, is, however, indubitable, according to Russell, because acquaintance is a dual relation, involving two terms: the mental act and the object (like sense-data). But in judgements or knowledge by description, we have a multiple relation, and thus an open possibility of error.

An important and central question to Russell's work arises here: 'Can we know, either with certainty or with probability, of the existence of anything with which we have no direct acquaintance? And if so, how is such knowledge obtained?'[255] Like Stout, Russell's overall concern

during this period is exactly how does one philosophically justify knowledge that goes beyond our mere acquaintance with things? That our knowledge must go beyond the things we are acquainted with is quite clear from the fact that the vast majority of our knowledge actually does so. I have never seen my great grandfather, nor have I ever directly observed a supernova. But these are all things I can be said to have knowledge of. According to Russell, we are not directly and immediately related to physical things, like tables and chairs; yet, I can be said to also *know* them in a certain sense, and I can make many true statements about them. It is here that knowledge by description plays a key role. Without getting into the details, suffice it to say that knowledge by description allows us to go beyond what we are acquainted with, but it does this by 'resting' itself upon knowledge by acquaintance as its 'foundation'.[256] A better way of putting this latter point, keeping in mind the propositional nature of knowledge by description, is to quote Russell's 'fundamental principle': '*Every proposition which we can understand must be composed wholly of constituents with which we are acquainted*.'[257]

My main point in bringing up the notion of acquaintance was in relation to making sense of Russell's claim of sense-data as things only persisting unchanged when we are acquainted with them. It should now be clear why this is the case. When we are not acquainted with a certain sense-datum it is no longer an item of indubitable knowledge. It is only when we are acquainted with a sense-datum, like a particular patch of colour, that we can be certain that it persists unchanged. Otherwise, knowing that it might persist unchanged, when we are no longer acquainted with it, is a matter of inference. This inference for Russell is certainly a plausible one, mainly because of the way it is defined. He says that just as a man is a husband in the relation of marriage, so are sensibilia sense-data in the relation of acquaintance. It is really a matter of definition[258] that sense-data are just sensibilia that we are acquainted with. The epistemological point still remains, that it is sense-data that we are most fundamentally, directly, and immediately related to in our knowledge of the external world. And that sensibilia, or sense-data that are no longer terms in the dual-relation of acquaintance, are 'precarious inferences'.[259] They may just persist unchanged without being in such a relation, but we are not certain that they do or must.

The above describes certain background beliefs of Russell's overall epistemological doctrine, which automatically provides an argument for his rejection of the idea that what is physical can persist unchanged

without being perceived. However, there is only one place I know of in Russell's writings that he explicitly provides an argument against such an assumption. It is a general argument that ultimately rests on the distinction between knowledge by acquaintance and knowledge by description. But it is important to mention here because of the way it is framed. It is framed in line with a general trend in Russell's engagement with the Controversy, it tries to expose postulates that need logical justification. Those who assume such an alleged characteristic of whatever is physical in their arguments (as do Stout and the British New Realists) might argue for it in this fashion: 'Whatever physics may regard as the ultimate constituents of matter, it always supposes these constituents to be indestructible. Since the immediate data of sense are not indestructible but in a state of perpetual flux, it is argued that these data themselves cannot be among the ultimate constituents of matter.'[260] But this, says Russell, is 'a sheer mistake'. This is because, explains Russell, the 'persistent particles of mathematical physics I regard as logical constructions, symbolic fictions enabling us to express compendiously very complicated assemblages of facts; and, on the other hand, I believe that the actual data in sensation, the immediate objects of sight or touch or hearing, are extramental, purely physical, and among the ultimate constituents of matter'.[261] In other words, any argument for this assumption with regard to physical objects, merely postulates 'indestructible' particles of mathematical physics – the very things in need of logical justification and construction.

Before I further examine a certain feature of sensibilia, allow me to briefly touch on a pertinent question. If we accept the indubitable nature of sense-data, an interesting question emerges: How are we to account for cases where what we perceive is usually regarded as not real, such as dreams and illusion? In such cases we normally attribute error to someone who takes them to be real. What is significant is that in answer to such a problem Russell takes exactly the same position as do Nunn and Alexander: all regard sensible objects which are presented in either dreams or illusions as really given.[262] Since, there can be no error in our acquaintance of such sense-data, the sense-data we are acquainted with in dreams or illusion are just as indubitable as are the sense-data from my sensory experience of a real table.[263] Recall, that this is one of the things that leads Alexander, for example, to regard his doctrine as more akin to the language of madness than that of common-sense.

We attribute error to such cases, however, according to Russell and the British New Realists, because of incorrect inferences that are based on

the given (sense-data).[264] The sense-data of dreams and illusions have their 'place' in the 'private space' of each subject. Error occurs, with regard to dreams, when it is thought that the sense-data of a private space of an individual may be correlated with the private space of other people and the physical space of physics. With regard to illusions, such as a stick appearing bent when half submerged in a tank filled with water, the sense-data are real, and there can be no doubt with regard to these. Error occurs only when we go on to infer from what we are actually acquainted with that 'the stick would feel bent to touch'.[265] If we make no such inference, then the sense-data acquired from seeing the stick bent will be one thing, and different from the sense-data acquired from feeling the stick. In the first case, we see a bent stick; in the second case, we feel a bent stick, and that is all there is to it. As Alexander puts it, there 'is illusion only if we deny that the bent and the straight appearance in the two different sets of conditions belong to the same stick; or if we were to say that the stick which is bent to the eye is bent to the touch.'[266] I wish to highlight the fact that Russell was in complete agreement with Alexander's and Nunn's unique position with regard to problem cases such as dreams and illusion. I say a 'unique position' because, *contra* Cook Wilson's geometrical counter-example, what are 'really' given are only sensible objects. Anything else, if we are to explain apparent change or illusion, are only inferred from sensible objects.

In the last section I also stressed Russell's relation to Stout's notion of a sensible object as 'appearing'. This was meant to highlight the objective nature of sensible objects, in both these philosophers.[267] Even though it must have appeared quite strange to assert that sensible objects are really *physical*, it was quite in line with this objective conception of appearances. Indeed, Alexander overtly stressed, in his 1910, 'the reality of appearances',[268] and that a 'partial appearance remains real and true, though incomplete'.[269] These partial appearances are 'physical appearances'.[270] This is connected with Russell's, Nunn's and Alexander's 'unique position' with regard to illusion and dreams, in that they further distinguish between appearance and illusion. Alexander puts it best when he says the distinctions '(1) that between the appearance and reality, and (2) that between illusion and reality … do not coincide. Appearance is contrasted with reality as part or aspect with whole. An appearance is a reality though not the whole of the reality of which it is said to be an appearance. An illusion is not a reality … it is not the reality as it purports to be.'[271] Though in a negative fashion, this is one fundamental way in which, I believe, Stout influenced the conception of sensible objects in all three, Alexander, Nunn and Russell.

Before I conclude this chapter, let me say a few words with regard to a peculiar shift that occurs between Russell's *PP* and his article of 1914, *RSDP*. This shift is related to the way Russell comes to construe those elements which possibly persist when they are no longer sense-data. In his 1912 work *PP*, Russell actually uses Stout's argument from change to conclude (as does Stout) that sense-data are not to be identified with a thing, but both must nevertheless causally correspond. Throughout *PP*, Russell maintains a strict separation between physical things in themselves and sense-data – they are two different *kinds* of things. Russell here also held the common 'prejudice' that what is physical, like a thing and its qualities, must persist unchanged when no longer perceived. It is partly for such reasons that Russell avoids referring to sense-data, in this work and others of the same year, as physical. But there is something else here to be noticed which is of some significance to our story. Consider the following passage from *PP*: 'If one object looks blue and another red, we may reasonably presume that there is some corresponding difference between the physical objects; if two objects both look blue, we may presume a corresponding similarity. *But we cannot hope to be acquainted directly with the quality in the physical object which makes it look blue or red*. Science tells us that this quality is a certain sort of wave-motion'.[272] It is then 'qualities' that Russell believes persist unchanged without being perceived, and thus are essentially of a different *kind* of thing than sense-data.

The relationship between qualities inhering in a thing itself, and sense-data, is further explained in Russell's response to Dawes Hicks' review of *PP*. In this response Russell explains that the relationship may be expressed using a logical analogy.

> Let us represent the relation of contemporaneous acquaintance by marriage; then the acts are represented by husbands and the sense-data by wives, while sensations are represented by married couples. The inseparable connection of the sense-datum with sensation, which appears to Dr. Dawes Hicks to be a problem, is merely like the inseparable connection of wives with marriage, a matter of definition, nothing more. But of course we may, as a result of the study of sense-data, find that they have other properties in common besides that of contemporaneous acquaintance. We may then give a name to the things having these properties, and inquire what is their relation to sense-data. *Let us give the name 'qualities' to those things that have all the properties common to all sense-data, with the* possible *exception of being given in sense. Then qualities, in our analogy, correspond to women; a quality is a wife by being given in marriage.*[273]

What is striking about this passage is that it is not really a description of Russell's own views in *PP*, despite the fact that this response is meant to be a clarification of just those views. The view of *PP* is that qualities *do not* have 'all the properties common to all sense-data, with the *possible* exception of being given in sense'. Rather, in *PP*, qualities are supposed to be a different *kind* of element than sense-data, with no properties in common. Recall that later in *RSDP* Russell uses the *same* 'analogy' to define the relation of unsensed sensibilia to sense-data. There he says, 'the relation of a *sensibile* to a sense-datum is like that of a man to a husband: a man becomes a husband by entering into the relation of marriage, and similarly a *sensibile* becomes a sense-datum by entering into the relation of acquaintance.'[274] Sensibilia are regarded, furthermore, as the *same kind* of thing that sense-data are.[275] The concept of 'qualities' has been replaced by 'unsensed sensibilia'. What then happens to qualities in *RSDP*? It seems they resume the role they played in *PP*, as material 'waves [that] impinge upon the eye'.[276] These, however, are now what must be 'constructed' from sensibilia. In the words of Russell: 'Physics cannot be regarded as validly based upon empirical data until the waves have been expressed as functions of the colours and other sense-data.'[277]

The disparity in Russell's response to Dawes Hicks' review of *PP*, and the actual *PP* doctrine concerning qualities, can be explained by considering a paper entitled 'On Matter'.[278] This paper was never published in Russell's lifetime, but was first read on 17 May 1912 to a group in Cardiff, and later was revised and read to the Moral Science Club in Cambridge on 25 October 1912. Hence it comes after the publication of Russell's *PP*, and before his response to Dawes Hicks, which was finished on 29 October 1912, and published in January 1913 in *Mind*. What this paper explicitly reveals is Russell's expressed agreement and sympathy with Nunn's doctrine with regard to 'sensational qualities'.

There are essentially two views that are given any weight in this paper with regard to the problem of matter. Both these views must adhere to 'the minimum statement of what we want': (1) sense-data must be 'associated' with matter in some manner or other; and (2) matter should not only exist while sensed.[279] The first view is a modified form of what Russell advances in his *PP*. Modified, for example, in the way Russell now rejects arguments from simplicity and induction, which were used to answer the question posed in *PP*: how do we know that a thing exists independent of a percipient? An answer to this question is now proposed on the basis of the many–one relation that supposedly exists in

scientific explanations of certain natural phenomena.[280] This view, however, is still quite similar to the views in *PP* primarily because it also makes a sharp distinction between sense-data and the thing-in-itself. Thus the problem remains for this view that 'even if we could know that sense-data "correspond" to some reality independent of perception, we could know nothing whatever as to the intrinsic nature of this reality'.[281] The second view Russell presents as an alternative to this first view, attributes it directly to Nunn, and considers it a *modified* form of naïve realism. Russell here says that naïve realism merely identifies collections of sense-data with matter. This view can be challenged by arguments like Stout's from change, which purport to demonstrate the difference between sense-data and things. This argument, however, says Russell, may be countered 'by a theory which regards a piece of matter as consisting entirely of constituents of the *nature* of sense-data, by including everything that could be a sense-data to any possible observer'.[282] In fact this is exactly what Nunn proposes against Stout. Nunn, as we saw, held the conjunction of the following four propositions: (1) That both primary and secondary qualities are in a thing and independent of any percipient; (2) The sensible objects of such qualities are also independent of any percipient; (3) It seems, therefore, that the only difference between sensible objects and the qualities in a thing is a difference not in *kind* or in *nature* but only that the one is directly apprehended while the other is not at the moment directly apprehended. It is in this way that sensible objects, or sense-data, are of the same nature as the qualities which inhere in a thing. Further, in response to Stout's Postulate, Nunn proposes that any number of colours may be in the same thing. This is Nunn's Postulate. This leads, as I suggested, to a theory of perspectives. (4) That is, these various colours are all seen from many possible perspectives by many 'possible observers'. This is exactly how Russell presents Nunn's doctrine. Not only is it a doctrine that makes qualities continuous with sense-data, but it is also a response to Stout's argument from change and Stout's Postulate. In a long passage worth quoting here in full, Russell describes Nunn's theory:

> What is self-evident is, I think, what crude realism affirms, namely that qualities which are or resemble sense-data, or at least those of sight and touch, exist at times when they are not given in sense. The arguments against this view are, perhaps, capable of being met by a sufficient boldness [here Russell references Nunn's 1910]. For example, we may admit that many colours may coexist in one place, each being only visible to observers in certain directions from the place in

> question … In fact, it would seem that the difficulties of naïve realism spring less from what it asserts than from what it is tempted to deny: so long as it merely asserts that such and such a colour is in such and such a place, it may be right, *but if so, it must be wrong in asserting that no other colour can be in that place at the same time*. If this view can be maintained, matter will be composed entirely of *qualities of the nature of sense-data*, but not only of those which one observer perceives; it will consist of all the sense-data which all possible observers would perceive in perceiving the same thing.[283]

Nunn's doctrine has a twofold advantage for Russell: it 'avoids an unknowable noumenon', and it is in harmony with our 'instinctive belief in the independent reality of qualities'. As such, Russell concludes this paper by cautiously accepting Nunn's views. 'I commend this hypothesis', says Russell in the last sentence of the paper, 'as at least not obviously untrue, and as more in consonance with our instinctive beliefs than any other hypothesis which the facts permit'.[284] Four days later, after presenting *OM* for the second time, Russell also finished the response to Dawes Hicks' review.[285] I suggest, therefore, that what Russell is actually defending in *NSD* is not the position advanced in *PP*, with regard to the nature of sense-data and qualities. Instead it is Nunn's 'hypothesis', which he now expressly commends, and the sense he now gives to the term 'qualities' is exactly in line with Nunn's sense of the same.

With regard to the switch from qualities to unsensed sensibilia, however, this will have to be explained in the next chapter. Let me just say here that by the time of *RSDP* qualities resume their character as being things of a different kind than sense-data and sensibilia. Another difference that emerges in *RSDP* from what he suggests earlier in *PP* is that qualities are not physical because they persist when unperceived. Rather, they are *constructed* explicitly as things of a different kind of nature from sense-data. It seems, therefore, that in the intermittent position between *PP* and *RSDP*, Russell shared (at least in *OM* and in *NSD*) with Nunn the view that qualities are of the same kind of nature that sense-data are. This is later abandoned for the position that it is unsensed sensibilia that are of the same nature as sense-data. We will see that this switch is connected to what Russell saw as an incomplete conception of space on the part Nunn. In fact, I will explain how it was in relation to Russell's work in understanding the deficiencies in Nunn's idea of space in connection with Stout's Postulate, that Russell came to the very important distinction between two different senses of 'place' – the place *at* which something is, and the place *from* which something is said to appear.

5
The Methods of Construction

We have seen some ways in which Russell's notion of sense-data was informed by the problems of the Controversy. In this chapter, I now want to relate an application of Russell's method of logical construction to some of the issues already discussed. Russell applies this method to the old problem of the external world. What I wish to suggest in this chapter, however, is that even though this problem has a long and venerable history among philosophers certain features of both the problem and the solution offered by Russell are influenced by the dialectics of the Controversy. Obviously such a problem has links, for example, with the various articulations of the Early Modern Empiricist philosophers, like Hume.[286] This ancestry is extremely important to keep in mind, but not at the expense of missing distinguishing aspects of Russell's doctrine. One way to go about sifting out these aspects is simply to compare Russell's articulation of the problem of the external world and his proposed solution with the articulations and solutions of the old Empiricist Philosophers. I will not attempt this here, since my aim is rather to show that Russell was well informed about the Controversy and that this, in some ways, helped to shape his ideas on the problem of the external world instead. I will thus try to sift out the distinguishing features of Russell's project by comparing it to certain key aspects of this Controversy. Some such key features of the Controversy are the nature of construction and inference, Nunn's and Stout's Postulates, and more generally, the avoidance of postulations. Such a comparison will demonstrate the way in which Russell's purportedly new 'logico-analytic method' was unique and how it might have made an advance upon the work done by those in the Controversy. Whether or not it was also an advance on early Empiricist Philosophers is a question I will leave unanswered here.

This chapter will be divided into two sections. The first will attempt to connect Russell's constructions, especially of space and physical things, to Nunn's and Stout's respective Postulates. It will be found that these Postulates actually did play a role in Russell's analysis of 'the same place'. The second section will be mainly concerned with Russell's distinction between logically derivative and primitive beliefs, and psychologically derivative and primitive beliefs. It will be seen that this way of dividing beliefs not only is meant to stress the sceptical concerns Russell had, but more importantly, to distinguish some methods from others. I will take the case of Stout and his ideal constructions as representing a contrast to Russell's method. I believe this will highlight a likely way Russell saw himself setting his methods apart from others who were very well known and acknowledged at the time. It will be in the next chapter that I will detail some of the ways mathematical logic contributed to the distinctiveness of Russell's notion of logical constructions.

The texts by Russell I will be concerned with span a three-year period. This period is marked by a prolific amount of material written on epistemology, both published and unpublished. The first is the unpublished paper we have already discussed in the last chapter called 'On Matter', from 1912. After this comes a major book that Russell attempted in 1913, entitled, *The Theory of Knowledge*, but never completely finished or published.[287] I will however not be including anything directly from this manuscript. Between these two pieces are nine short notes on matter that will also play a role in my discussion in this chapter.[288] Russell was also asked to give a series of lectures at Harvard in the spring term of 1914. These lectures were published in the same year and called *Our Knowledge of the External World*.[289] Before he went to Harvard, however, he also wrote an extremely important paper that he completed in January 1914 entitled 'The Relation of Sense-Data to Physics'. Afterwards come two lectures: the first was the Herbert Spencer Lecture at Oxford in 1914 called 'On Scientific Method in Philosophy'; and the second was a lecture given to the Manchester Philosophical Society and published in the *Monist* 1915 as 'The Ultimate Constituents of Matter'. From *OM* to the last in this list, there are many developments in Russell's answers to the problem of the external world. I will not be including in this chapter Russell's later works on logical constructions, such as his lectures on Logical Atomism and his more systematic works like the *Analysis of Mind* and the *Analysis of Matter*. This is because I wish to stay historically as close to the Controversy as I can. Moreover, especially with regard to the last two books mentioned, these works take

directions quite different from the original work on constructions of the external world given in the period I am interested in.

5.1 Russell's constructions and Nunn's Postulate

The first thing I will examine in this chapter will be the ways in which Nunn's Postulate had a direct effect on Russell's logical constructions of space and of physical things. This will also be related to what Russell saw as a major deficiency shared by all in the Controversy – a seriously lacking notion of 'the same place'. What I have called Nunn's Postulate was articulated in reaction to Stout's Postulate. The latter Postulate was used by Stout to show that because a thing can only 'really' have one respective sensible quality, and since there may be many 'contrary' sensible appearances of a thing, sensible appearances must be mental. Nunn attacks the heart of this argument by rejecting the Postulate upon which it is based and replaces it with another. Instead, Nunn's Postulate claims that it is possible for one thing to have an indefinite number of contrary qualities all in one and the same place.

In *OM* Russell describes Stout's Postulate as a claim consonant with 'naïve realism', and actually goes on to say that if anything is wrong with naïve realism it is this Postulate. Russell then explicitly suggests that Nunn's Postulate might be the modification required to make naïve realism plausible. As we have seen, Russell even announces that prior to Nunn's suggestion, he actually assumed something like Stout's Postulate to be true, but that Nunn's arguments in his article of 1910 convinced him otherwise. The result of this new conviction led Russell to try understanding the nature of an indefinite number of sensibilia. For some, such as Bosanquet, this comes as no surprise, for this was precisely one of the objectionable features of the British New Realism: it permits an infinite number of sensible appearances to persist. As we shall see, Russell's attempt to understand this permission led him to his six-dimensional theory of space, expressly formulated to accommodate the great number of sensibilia.[290]

In all this back and forth, it may have seemed to Russell that there were at least two things that still needed clarification. The first was a better understanding as to what exactly was the relationship between sense-data, and both physical things and percipients; and related to this was the second point about a proper analysis of what it meant to be 'in the same place'. The first is a more general problem Russell may have seen in the various contributions to the Controversy. Except for some rough explications, no one seemed to properly connect our knowledge

of sensible appearances to our knowledge of physical things. But when attempts were made in understanding these connections, the idea of constructions, as we have seen, was used to help relate sensible objects to physical things. Russell held that such constructions were not only ridden with psychological excesses, but that no definite procedure of construction was proposed apart from vague socio-psychological processes. I will reserve this first point, however, for a later discussion. I will therefore start with the second point – the need for a proper analysis of the idea of 'in the same place'. This discussion will provide us with our two examples of Russellian logical constructions – the construction of physical space and the construction of physical things in this space. Another significant aspect that will arise from this discussion will be the way Stout, Alexander and Nunn did not go far enough, from Russell's perspective, in dispelling postulations in what they took as given. This is significant because they saw themselves as crusading against postulation, but they seemed to have assumed too much in what they took to be given and primitive.

Let me begin with the question: why is an analysis of 'the same place' needed? There are at least two reasons for such an analysis; the first has to do with Stout's argument from change. Before having read Nunn's 1910 Russell says he had thought this argument to be 'irrefutable'.[291] 'It is said', by those who advance such an argument, 'not wholly without plausibility, that these different shapes and different colours cannot co-exist simultaneously in the same place, and cannot therefore both be constituents of the physical world'.[292] But the 'supposed impossibility' of colours co-existing simultaneously, continues Russell, 'derives its apparent force from the phrase: "*in the same place*", and it is precisely in this phrase that its weakness lies'.[293] Russell goes on to say, 'the conception of space is too often treated in philosophy … as though it were as given, simple, and unambiguous as Kant, in his psychological innocence, supposed. It is the unperceived ambiguity of the word "place" which, as we shall shortly see, has caused the difficulties to realists and given an undeserved advantage to their opponents.'[294] Not only is this last sentence an obvious reference to the Controversy, but it is also an attack on Stout's Postulate, which is an essential premise in Stout's argument from change.

In another place Russell claims that the same argument from change, as used by Stout, 'presupposes that all our difficulties have been solved', especially in its use of the phrase 'the same place'. But, 'as yet, we have no right to speak of a "place" except with reference to one given set of momentary sense-data. When all are changed by a bodily movement,

no place remains the same as it was. Thus the difficulty, if it exists, has at least not been rightly stated.'[295] In other words, to use the phrase 'the same place' requires one to 'have already constructed some world more stable than that of momentary sensation'.[296] And the difficulty has not been 'rightly stated' because, if it were, it would have to be stated in terms of a construction, which shows space to be a complex, rather than a mere given. As we shall see, if this complexity is not taken into account, the difficulty will miss the mark by making sense-data in a place *simpliciter* rather than, as Russell argues, sense-data having to be in two places.[297]

This leads us to the second reason for giving an analysis of the phrase 'in the same place'. Such an analysis is not only meant to debunk Stout's Postulate, it is also meant at the same time to be a refinement of Nunn's Postulate.[298] For the latter also takes for granted the notion of 'the same place'. In other words, Nunn *does assume* that Stout's challenge is correctly stated and goes on to respond in kind, namely, that many contrary qualities may co-exist all 'in the same place'. He does not give any analysis of what this latter notion can mean. Both Stout and Nunn, that is, merely assume that sensible qualities being 'in the same place' or not is something directly given. Russell gives an analysis of Nunn's Postulate and its use of the phrase 'in the same place'. This is not meant to be a rejection of Nunn's Postulate, but only a deeper understanding of it. Among other things, this fact is splendidly brought out in a letter Nunn wrote to Alexander on 10 July 1914. This letter describes a long discussion Nunn had with Russell on the latter's return from Harvard.

> My dear Alexander,
>
> A lucky chance gave me the opportunity of a long talk yesterday with Bertrand Russell, newly back from the States but too 'fed up' with philosophical discussions to join us at Durham. He gave me a proof-copy of his article 'The Relation of Sense-Data to Physics' just published in *Scientia*. This article explains in part the position which Moore tried to describe and will, I think, give you as much comfort as I believe it is going to give me. *Russell tells me that he started by recognizing that my paper on 'Secondary Qualities' was successful as far as it went but that it needed to be completed by a theory of space and time in order to stand properly on its legs. (I told him, of course, that you and I were acutely conscious of that same fact.) The present article is an attempt to supply the needed basis.* One wants, of course, time to think over the matter but speaking with cautious though early enthusiasm I must say that I find it masterly and believe that it promises to give me

> complete satisfaction … I am particularly pleased to see that Russell apparently recognised that I was concerned to shew that *sensibilia* may exist when unperceived not because I want them to do so but because the assumption that they cannot is a mainstay of those who would make them (like Stout formerly if not now) purely psychical existences … I also heard with much pleasure that he would have defended me against Moore the other afternoon; in other words, having by a characteristic exercise of his great genius put my crude theory on a satisfactory basis he is now openly on our side.[299]

This letter clearly illustrates one of Russell's motives in *RSDP*: to take Nunn's position a step further, providing it with support, and above all with a completer theory of time, but especially of space. This is consistent with some of Russell's public statements about the issue. For example, in Russell's 1915 address in Manchester, he begins by saying that his 'main position, which is realistic, is, I hope and believe, not remote from that of Professor Alexander, by whose writings on this subject I have profited greatly. It is also in close accord with that of Dr. Nunn.'[300] And at the end of the same address he makes it a point to conclude with an analysis of what it means for sense-data to be all 'in the same place', because, as he says, 'unduly simple notions as to space have been a great stumbling-block to realists';[301] the 'realists' are Alexander and Nunn.

The question that naturally arises, however, is why Russell thought an overly simple notion of space was a 'stumbling-block' for the British New Realists? Part of the answer lies in the fact that Russell thought such an 'unduly conventional theory of space'[302] gives an 'undeserved advantage' to philosophers like Stout, who argue that sensible appearances must be psychical existents. The undeserved advantage, I believe, lies in the fact that the British New Realists assumed the same unduly simple theory of space that Stout did. This gives Stout an advantage, according to Russell, because as long as being in 'in the same place' is taken for granted as a given one is bound to conflate certain significant distinctions. For instance, a fundamental distinction that is 'blurred' is one between the public 'perspective space' of physics, and a subject's 'private space'. This has had 'disastrous results for the philosophy of physics', says Russell.[303] This conflation is problematic not only for Stout, but the British New Realists as well. And so asks Russell, 'what does the critic … mean by "the same place"? The use of such a phrase presupposes that all our difficulties have been solved; as yet, we have no right to speak of a "place" except with reference to one given set of momentary sense-data.'[304] This last sentence, and this is the essential

point, is also directed to the British New Realists' responses to Stout. Let us illustrate this by the 'difficult cases' Nunn presents which we have already discussed in Chapter 3. These are cases of perspective where, for example, an automobile sounds a constant horn as it drives along a radius of a large semi-circle lined up at the circumference by many stationary percipients. Nunn asks whether or not the source of the sound has or 'owns' all the various sounds heard by all those who hear it on this semi-circle? His answer is an affirmative – that a thing may have contrary and an indefinite number of sensible qualities. Russell, however, is proposing that Nunn has not gone far enough here. That all Nunn can properly speak of is the *momentary sense-data* of one percipient on this semi-circle. All the rest (the relation between her sense-data and those of others, the distinction between her private space and the space which is common to all the others, the car at all the relevant moments in time, etc.) are all aspects that need to be constructed from her own momentary private world. Consequently, says Russell, we 'cannot speak legitimately of changes in the point of view and the intervening medium until we have already constructed some world more stable than that of momentary sensation'.[305] Otherwise, it plays into the opponent's hands, because we are properly left with only a sensible appearance of a thing by one percipient at one moment in time, thereby ruling out the proposal that there can be, at this momentary level, an indefinite number of sensible appearances all at one moment, in the one and same place of her private world. In other words, against Nunn, from this momentary private world of one percipient, Stout's Postulate seems to be much more intuitive. Or in the language of Russell, only one sensible appearance of a thing is a member of the set which constitutes the perspective at that one moment.

Nunn's perspective cases lead him to the suggestion that a new conception of 'thinghood' is demanded. One requirement, for example, out of the five that I mentioned in Chapter 3, which Nunn advances for a new conception of thing is that 'a thing must not be thought of as limited by a precise spatial boundary. It may be necessary to think of it as filling an indefinite part of the material universe.'[306] This might have been considered by Russell to be one of those 'disastrous results for the philosophy of physics'. This may be disastrous because on the whole, physics seems to demand that physical things must fill a definite part of the material universe. Nunn is led to a radical reformulation of the conception of thinghood partly due to the fact that instead of asking what it means for many sensible qualities to be 'in the same place', he proposes that a thing's place must be indefinite, since it may contain an

indefinite number of coexisting qualities in and around it. From Russell's point of view, therefore, Nunn is forced to reformulate the notion of a thing, because, without constructing a public perspective space from the momentary private spaces of one percipient, one will be bound to confuse the sensible appearances found in one place with those found in another, thereby forcing the concept of a thing to be much less precisely positioned than it ought to be (as demanded by physics). 'But these troubles', says Russell, 'result from contenting ourselves too readily with the merely three-dimensional space to which schoolmasters have accustomed us. The space of the real world is a space of six-dimensions, and as soon as we realise this we see that there is plenty of room for all the particulars for which we want to find positions. In order to realise this we have only to return for a moment from the polished space of physics to the rough and untidy space of our immediate sensible experience.'[307] We shall see below what exactly this six-dimensional space amounts to.

For Russell there are two places attached to every sense-datum: there is the place *at* which the thing appears, and there is the place *from* which the thing appears. Both are places in a constructed 'all-embracing space of physics'.[308] Until this construction has been affected, one can only speak of a place in one's own 'private space'. But, more importantly, one cannot utilize with certainty physical things, because they too require a perspective space for their construction. But as we have seen, Russell accuses those in this Controversy as having already postulated a definite knowledge of physical things and the perspective space which is essential to the former. In other words, in simply assuming the clarity of the phrase 'in the same place', Stout, and also Nunn and Alexander, all have postulated a 'more stable' world than they actually are justified in assuming. As Alexander would have put it, things and space(s) are merely 'postulated', and this evades the problem from the get go.

What is interesting is that Russell requires the construction of physical things to comply with the properties that the science of physics assigns to them. This is interesting, especially when it is contrasted with Nunn's approach, which sets out to altogether re-construe physical concepts such as 'thinghood'. Instead, Russell's approach is one which attempts to stay within the bounds of not only the physical sciences (like physics and physiology) but also psychology. This, as we shall see in the next section, is one of the characteristic features of Russell's method of logical construction.

Russell's approach makes him privy to particular issues which may not have been so central to the Controversy. For instance the question

of how to reconcile 'the world of physics' with 'the world of psychology', becomes a pivotal problem for Russell. On the whole this problem does not seem to have been in the purview of the Controversy.[309] This fact is alluded to in another letter Nunn wrote to Alexander on 28 July 1914. There he writes to Alexander, 'I hasten on to give you something new which I picked up the other day from Russell, he having got it from Whitehead. It concerns an ancient trouble – the reconciliation of perceptual space and time which we get in finite blocks with the theoretical atomic space and time.'[310] Not only is this 'new' concern of Russell's something which arises from his particular approach to the sciences (contrasted with, for instance, Nunn's approach), but it also arises from Russell's analysis of 'the same place', which leads to a fundamental distinction between two types of spaces – the public space of physics and the private space of an individual's sensible experiences. By not distinguishing between and by ignoring the need for a reconciliation between the world of physics and the world of sense, it is no wonder that a further analysis of 'the same place' was not given by those in the Controversy. We will now set out to describe Russell's construction of these spaces, and of physical things.

Russell begins his constructions with the fundamental claim that no percipient's 'private world' is identical to another's. This claim is borne out by the observation that no matter how similar the view of two people looking at the same table may be, there will always be differences, however minute, between the two points of view.[311] Each mind then experiences a private world of its own, which exists exactly as perceived, with its own three-dimensional space, and its own correlations of various spaces (such as the space of touch with the space of sight). Hence, there are as many private worlds as there are perceivers. But this number of private worlds is still insufficient for the purposes of physics, for there may then be an infinite number of other worlds that are not perceived, but which may nevertheless be said to also exist. 'We may further suppose', says Russell, 'that there are an infinite number of such worlds which are in fact unperceived. If two men are sitting in a room, two somewhat similar worlds are perceived by them; if a third man enters and sits between them, a third world, intermediate between the two pervious worlds, begins to be perceived. It is true that we cannot reasonably suppose just this world to have existed before, because it is conditioned by the sense-organs, nerves, and brain of the newly arrived man; but we can reasonably suppose that *some* aspect of the universe existed from that point of view, though no one was perceiving it.'[312] All perceived and unperceived 'points of views' Russell calls the system of

'perspectives', and 'private worlds' are merely perceived perspectives. Russell does admit that an 'exact definition' of perspective is 'not quite easy',[313] but rough definition may be given if 'we confine ourselves to visible objects or to objects of touch we might define the perspective of a given particular as "all particulars which have a simple (direct) spatial relation to the given particular" '.[314] What is important to notice in this rough definition, especially for our later discussion, is that relations are also regarded to be given in each perspective. Not only, that is, are there particulars a percipient is directly related to in her perspective, but she is also acquainted with the relations between these particulars. 'Between two patches of colour', continues Russell, 'which I see now, there is a direct spatial relation which I equally see'.[315]

Even though no two perspectives may be identical to one another, they may still contain many similarities. When the relation of similarity between two perspectives is great, then we say they are 'near together in space'.[316] The relation of similarity, however, is something which relates two perspectives in a space *outside* of the spaces of each perspective. When two perspectives are said to be near one another, they are so related in a space which contains both these perspectives, but is in neither of them. This space, in which perspectives are terms of certain relations, is called 'perspective space', or as Russell puts it, a perspective is an 'element' of perspective space, or a 'point' in such a space.[317] The relation of similarity between perspectives, then, is a relation in perspective space. Between any two similar perspectives there may be a whole series of other perspectives still more similar. So we may correlate perspectives so as to form a perspective space that is continuous and even three-dimensional.

Using the relation of similarity, common-sense 'things' may also be constructed by correlating sensibilia in one perspective with those in another. Given sensibilia in one perspective and their spatial arrangements, correlate these with similar sensibilia and similar spatial arrangements in neighbouring perspectives. 'Such correlated "sensibilia"', says Russell, 'will be called "appearances of one thing" '.[318] Since 'time' of physics has not been yet constructed, a 'thing' is merely a collection of appearances at a given moment. 'Thus an aspect of a "thing" is a member of the system of aspects which *is* the "thing" at that moment … All the aspects of a thing are real, whereas the thing is a merely logical construction. It has, however, the merit of being *neutral* as between different points of view, and of being visible to more than one person, in the only sense in which it can ever be visible, namely, in the sense that each sees one of its aspects.'[319] What can Russell mean by

saying that such a logical construction of a thing has the advantage of being 'neutral as between different points of view'? Russell begins the discussion in *OKEW* by saying that he is going to give a definition of 'the momentary common-sense "thing", *as opposed to* its momentary appearances'.[320] He stresses that each different perspective will have only *one* aspect of a thing (for example, one colour aspect, one shape aspect, etc.), while the momentary thing is the class of all aspects, which are members of all similar perspectives. It is in this way that an aspect may be a member of both the perspective and the class of aspects which make up a thing. But before we try to make sense of the claim that an aspect may therefore be in two 'places' – the place where the perspective is and the place where the thing is – we must first construct an arrangement of perspective space which will allow us to speak of different 'places'.

Perspectives may be arranged in the following manner: take a penny as the thing which appears in various perspectives. From one perspective this penny may appear round, from another it appears elliptical, while in another it appears larger or smaller. Take all the perspectives in which the penny, for instance, appears elliptical. These can be arranged into a series by order of size. This series will be a straight line in perspective space. We can make such a series for any of the other different perspectives of the penny, whether it appears round, or straight (as it would if seen from the edge). All these lines, then, can be arranged into a three-dimensional order. Furthermore, since the private space (of a private world) and the perspective space (where the thing is) are each three-dimensional, Russell says that in order to fix the coordinates of an aspect one must have a six-dimensional space.[321] One three-dimensional space to fix its position in private space, and another three-dimensional space (constructed out of the former) to fix an aspect's position in perspective space. This six-dimensional space is thus 'the one all-embracing space of physics'.[322]

Once we have such a six-dimensional space at our disposal, we can make sense of what it means for a thing to be in a certain 'place', and what it means for a private world to be in its own place in this perspective space. What is meant by 'the place (in perspective space) where a thing is'?[323] Take all the series, or straight lines, one has constructed using the various appearances of one thing. These lines will all meet in one perspective (or 'point') in perspective space. This intersection point is the place where the thing is. So, in the case of the penny, if we take the series or the straight line created by ordering all the elliptical appearances of the penny by their size, and the separate series or straight line

determined by all the round appearances of the same penny, these two straight lines will intersect at a perspective. This perspective can be defined as the place where the penny is in perspective space. This also helps to explain what it means to say that a thing is nearer when it appears larger in a perspective; it simply means that such perspectives are nearer to the intersection point – the place where the thing is. We can also define 'here' in perspective space to be the place where our private world is. 'Thus we can now understand', explains Russell, 'what is meant by speaking of a thing as near to or far from "here". A thing is near to "here" if the place where it is [is] near to my private world.'[324] This is obviously just a sketch of what is meant by 'the place where my private world is in perspective space'; a fuller account, however, Russell does not provide.[325]

We come now to some of the key results of such constructions. These results are: an understanding of what it means for aspects to be in two places; how this dispels the issue of combining an indefinite number of contrary appearances all 'in the same place'; and finally how this helps to reconcile the world of psychological and the world of physics. I will deal with each in turn. First, we have come to see how Russell thinks all aspects of one thing must be in two places: the place where the thing is, and the place where the private world is. The first Russell calls the place *at* which the aspect appears, and the second is the place *from* which the aspect appears. He, therefore, says 'that *two* places in perspective space are associated with every aspect of a thing: namely, the place where the thing is, and the place which is the perspective of which the aspect in question forms a part. Every aspect of a thing is a member of two different classes of aspects, namely: (1) the various aspects of the thing, of which at most one appears in any given perspective; (2) the perspective of which the given aspect is a member – that in which the thing has the given aspect.'[326] What is the significance of this distinction? In a short unpublished manuscript Russell states quite clearly the significance that this distinction had for him. He there says that the 'difficulties of realism arise from such facts as that the colours and shapes of objects appear different from different points of view. We assume that there cannot be two different colours at a given moment "in the same place" or that "the same thing" cannot have two different shapes. Hence, when to one observer a thing looks white, and to another brown, both cannot see truly. But this difficulty only occurs to the *philosopher*: the plain man is familiar with the facts, but sees no difficulty. To him it seems natural that things should look different from different places.'[327] Like Nunn, it is the plain man's 'natural' familiarity that

Russell seems to want to account for, rather than the philosopher's. Earlier on, in another unpublished note, he says that we 'ought not to say "red is there" but "red is there from here". Red is not in a place *simpliciter* but is in a place *from* a place. This is not the ultimate analysis of the facts; but the ultimate analysis must be something which *leads* to *two* places, *here* and *there*, as involved in the visual datum. This makes it possible for two colours to be in the same place at the same time *from different places*, and so avoids one of the chief difficulties that beset naïve realism.'[328] The last sentence gives away the fact that Russell is also defending Nunn's Postulate, but for Russell this can only make sense if the aspects of a thing are arranged in two different places.

But exactly how does this two place analysis allow many different visual data to be in the same place? Recall, no two perspectives can ever be identical – they never contain the exact same sensibilia. Russell also proposes that only one aspect of a thing appears in each perspective. So in the place *from* which an aspect of a thing appears, only one definite aspect can appear at one time. Notice how this intuition seems to correspond to Stout's Postulate. But there is more. All the aspects which are similar and have similar spatial relations can be collected from each individual neighbouring perspective, so as to form the momentary physical thing, which is the class of all these aspects. At this point one must avoid the temptation to deal with the place where the thing is *at* separately from the place *from* which an aspect appears. Or as Russell puts it, 'there is no such complex as "greenness in that place", but only "greenness in that place from this place" '.[329]

As we saw, the place where the thing is in perspective space is a function of all the various perspective-lines in this space – it is where all these intersect in a perspective-point. Thus, the aspect of the place *from* which it appears will also be directly correlated to the place *at* which it appears. The thing's place in perspective space is well defined, and an aspect is also a member of a thing. The one momentary and stationary thing will thus always be in one and the same place in perspective space *from* every perspective which contains one of its aspects as a member. All these various aspects of different perspectives can be said to be all in the same place *at* which the thing appears. The main supposition here is that the place *at* which the thing appears is the same for all perspectives which contain its aspects. This is made possible by the construction of this place using all the relevant perspectives as intersecting series or lines. The lines are all in a sense related also to this place where the thing is in perspective space; that is, the place where a thing is in perspective space is a function of these series. This is the way Russell thinks

the phrase 'in the same place' can be made sense of, especially in relation to Nunn's Postulate.

From a certain point of view, specifically one that treats each of the two places in the above analysis separately, one may suggest that Russell is here attempting to *reconcile* Stout's Postulate with Nunn's. What each Postulate is missing, in order to give a complete account of what it means for aspects to be 'in the same place' or not, is this reconciliation. The word 'reconcile' may be too strong here. Rather, one may suggest that Russell saw Stout's Postulate as true for only a partial view of the world, one consisting only of a private world. But a fuller account, one which then constructs a fuller world (like the world of physics), would have to make sense of Nunn's Postulate. But such a world, according to Russell, is a logical construction; that is, there are entities involved in such a world with which we are never directly acquainted. These entities and the relationships between them need then to be constructed out of entities that we are directly acquainted with. From Russell's point of view, therefore, it is in this way that both Nunn and Stout postulate too much of a stable world – they both assume a public space and physical things in this space as givens.

Nunn assumes too much of a stable physical world in his Postulate (especially in its assumption of 'the same place'), but, according to Russell, Nunn also assumes too much in his notion of sensible qualities. This comes across in Russell's shift from accepting 'qualities' as a species of sense-data that are not perceived by any perceiver (as in *OM* and *NSD*) *à la* Nunn, to demanding in *RSDP* that they should rather be constructed. In *RSDP*, for example, 'visual qualities' are understood as being 'wave-motions' from which the colours of a thing are inferred.[330] In this sense, says Russell, 'Physics cannot be regarded as validly based upon empirical data until the waves have been expressed as functions of the colours and other sense-data.'[331] As a result of this shift in understanding, Russell instead introduces the term 'unsensed sensibilia' in the place of 'qualities', partly, it seems, so as to stress *the similarity in kind* of sense-data to the former, and not the latter. But also to further stress that 'qualities', if understood in the fashion of science, must themselves be constructed as matter from sense-data. All this Nunn seems to take for granted when he suggests that we are directly aware of sensible qualities.

Russell does not speak in direct opposition against Nunn's deficiencies or Stout's; nor does he mention the two by name. Rather he says, the two places associated with an aspect – the place *at* which it appears, and the place *from* which it appears – are linked to the ways in which,

respectively, physics and psychology classify the appearances of a thing. 'The physicist naturally classifies aspects in the first way', says Russell, 'the psychologist in the second. The two places associated with a single aspect correspond to the two ways of classifying it.'[332] In another place, Russell continues, that to 'the psychologist the "place from which" is the more interesting, and the "sensible" accordingly appears to him subjective and where the percipient is. To the physicist the "place at which" is the more interesting, and the "sensible" accordingly appears to him physical and external. The causes, limits and partial justification of each of these two apparently incompatible views are evident from the above duplicity of places associated with a given "sensible".'[333]

The 'reconciliation' of the world of physics with the world of sense and psychology is one of the 'chief outcomes' of the above discussion of the logical constructions of spaces and things.[334] This is important, for as Russell sees it, one of the fundamental problems is shown 'to be more apparent than real',[335] namely, the problem that these two worlds – that of physics and psychology (or sense) – are apparently 'incompatible'. The world of physics, says Russell, is inferred, while that of sense is given;[336] physics begins, along with common-sense, with a belief in a world full of rigid and permanent things, while the world of sense is filled with 'merely subjective' data, where nothing is permanent.[337] Since physics is an empirical science it must be based on some empirical means of verification. For verification, physics requires that we be related solely to sense-data, so that the very possibility of verification rests on this relation. But the data of sense are such things as patches of colour, shapes, sounds, tastes, smells and certain relations, while many of the entities of physics have no colour, make no noise and have no taste. If these latter are to be verified, they must have some 'correlation' to sense-data. The only sort of correlation that may plausibly do the job, according to Russell, is one that expresses physical things as *functions* of sense-data. 'Thus if physics is to be verifiable', explains Russell, 'we are faced with the following problem: Physics exhibits sense-data as functions of physical objects, but verification is only possible if physical objects can be exhibited as functions of sense-data. We have therefore to solve the equations giving sense-data in terms of physical objects, so as to make them instead give physical objects in terms of sense-data.'[338] The logical construction of physical things and of space given above are then just these functions of sense-data. Once these constructions are given, in terms of sense-data (and sensibilia in general), Russell can then show, as we have seen, how the gap between these two incompatible worlds is really just apparent.

What is interesting is that in relation to the Controversy the articulation of this problem (of how to reconcile the two incompatible worlds of physics and psychology to account for verification in the former) results in certain glaring postulations made by those in this debate. As I have already mentioned, this problem is connected to the issue of constructing perspective space out of private space. When these are conflated, as they seem to be in much of the Controversy, the issue of what is derivative and what is primitive or given in knowledge becomes obscured. Part of Russell's achievement in dealing with the issues in and around the Controversy can be attributed to this very method of distinguishing between what is derivative from what is given. It should be clear by now that one of the motives in distinguishing these is to identify what must *not* be merely postulated. For what is derivative must be constructed, and not just assumed as given. Though Stout comes close to these issues he does not properly distinguish between *logically* derivative beliefs and *psychologically* derivative beliefs. It is this distinction which sets Russell's constructions apart from Stout's ideal constructions. Before I come to this issue in the next section, let me say a few words about Stout's articulations of a similar problem I already mentioned in Chapter 1.

In 'Things and Sensations', Stout describes a conflict between common-sense and science. The problem is that common-sense adopts the view that 'things and their sensible appearances coalesce in indivisible unity'; while for science 'the sensible appearances have an existence and history separate from the existence and history of the things'.[339] But, says Stout, we must 'harmonise these apparently conflicting views while doing justice to both'.[340] We must do 'justice to both' because, like Russell, Stout believes philosophy must be 'bound' to some given body of knowledge. 'Philosophical problems', says Stout, 'of this kind must be such as arise inevitably out of the organised body of pre-philosophical knowledge.'[341] Russell, however, calls this latter 'common knowledge' and says something quite similar: 'In every philosophical problem, our investigation starts from what may be called "data", by which I mean matters of common knowledge, vague, complex, inexact, as common knowledge always is, but yet somehow commanding our assent as on the whole and in some interpretation pretty certainly true.'[342] For Russell, however, instead of the problem occurring between common-sense and science, it arises between the world of physics and the world of psychology. Not only does it seem that for Russell if there were a conflict between common-sense and science that the latter would trump, but that 'science' as used by Stout is much too broad.

Too broad, for example, because as in Russell's articulation, one sees immediately that within the sciences themselves conflicts may arise (as in physics and psychology).

Stout goes on to account for and explain the common-sense unity through an explanation of how the separation of things and sensibles in the sciences can be used to actually *form* this unity. So it turns into an explanation of the common-sense view using the views of science – in other words, the common-sense view is supposed to be based on the scientific view.[343] What this presupposes is that what is in need of explanation is the unity given in common-sense, and not the scientific view. Russell, rather, notes, that certain fundamental assumptions of physics, for example, arise from the world of common-sense.[344] It is then in this sense that Stout seems to be taking the *results* of science as fundamental. For Russell, rather, the results of science are also in need of philosophical examination. Philosophy may 'emphasise the most general *results* of science, and seek to give even greater generality and unity to these results … [But] philosophy inspired by science has gone astray through preoccupation with the *results* momentarily supposed to have been achieved.'[345]

In the case of the problem of the external world, according to Russell, such a reliance on the results of science also leads us to take for granted those very aspects which require our attention; such as the derivative world of physics itself. From this point of view, therefore, one of the elements that requires justification is some of the concepts of the sciences themselves. In order to know what requires a logical justification and what does not, Russell believes that what is fundamental is a way to distinguish a belief that is derivative from one that is primitive. But these two must be further divided into derivative beliefs which are either logical or psychological, and primitive beliefs which are either logical or psychological. In this way, many of the problems that Russell directly or indirectly exposes in those involved in the Controversy can be related to the question of how to distinguish these two types of beliefs. Indeed, as we have just seen, this is directly related to Russell's desire to avoid merely postulating what requires logical justification and thus construction. In the next section I will further explore this very distinction and its relation to Stout's ideal constructions.

5.2 Constructions, psychology and the essence of philosophy

Russell begins his examination of the problem of the external world with what he calls 'common knowledge'. It is from this source that he

not only derives the proper articulation of the problem, but also classifies our knowledge as either inferred or non-inferred. In general Russell calls those parts of our knowledge, which are not inferred from anything else, 'primitive', while that part which is inferred he calls 'derivative'. The 'inference' involved is not necessarily to be taken 'in the strict logical sense'.[346] This kind of division of our common knowledge is important, because one of Russell's main complaints against the participants of the Controversy was that they did not go far enough in distinguishing those aspects of our common knowledge that are primitive from those parts that are derivative, thus leading to what they, on the whole, wished to avoid: postulation. As we saw in the last section, for example, Nunn did not take certain aspects of our knowledge of physics as derivative. Stout, it may be argued, however, probably went the furthest in this direction. One reason may be that both Alexander and Nunn seemed to be much more concerned with the particular issue of the nature of sensible appearances than with the question of how to connect these to our knowledge of physical things, and more generally, the external world[347]; to while Stout's problem was always the more general one of how to connect 'our own immediate experience' with '*something with which we are totally unacquainted*'. This I referred to as Stout's central problem,[348] a problem which he shared with Russell, more so than with anyone else in the Controversy.

There are two related aspects, from Russell's perspective, however, which Stout seems to lack in his answer to this central problem – especially in relation to the more specific problem of the external world. The first is a proper method of doubt meant not only to help one distinguish philosophically those primitive beliefs from those which are derivative, but also meant to be a motive for justifying some of our derivative beliefs. From Stout, however, one gets the impression that he relied heavily on psychology for both these purposes. This then is related to the second, but a more fundamental aspect. That is, a further distinction between what is primitive or derivative *logically*, and what is primitive or derivative *psychologically*, is absent in Stout's repertoire. For Russell this aspect is fundamental precisely because it not only helps one to better articulate the *real* philosophical problem (as opposed to say the psychological one) involved, it also points in the necessary *philosophical* direction required for answering such a question. More specifically, logic is for Russell the 'Essence of Philosophy'.[349] As he puts it in the beginning of Lecture II, the 'topics we discussed in our first lecture, and the topics we shall discuss later [including the problem of the external world], all reduce themselves, in so far as they are genuinely

philosophical, to problems of logic. This is not due to any accident, but to the fact that every philosophical problem, when it is subjected to the necessary analysis and purification is found either to be not really philosophical at all, or else to be … logical.'[350]

I wish to show two related things, then, in this section. The first is how Russell's method of logical construction compares to Stout's method of construction. And secondly, that the sceptical motive in Russell's work is not as fundamental as his desire to provide a 'logical process' (as opposed to a psychological, physical process, etc.) from which to pass from what is primitive to what is derivative in our common knowledge. What I wish to suggest is that this desire is not borne out of scepticism, but out of his desire to provide a philosophically interesting answer to a purified philosophical question – both by means of logic. That is, it is this motive that helps to purify the problem into a philosophical one, and thereby also helps to provide a basis for a *logical* construction as an answer to such a problem. This I believe corresponds quite nicely with Russell's overall intent to demonstrate ways in which logic really is the essence of philosophy in most of his writings during this period (rather than, say, a response to scepticism). This is not to say that Russell is not interested in answering certain sceptical concerns. These sceptical concerns play a role in motivating the need to logically justify our derivative beliefs. But I wish to stress that scepticism is not the fundamental concern, even though it might be one of the major ones in Russell's project of logical construction. Instead, I believe that Russell was much more fundamentally interested in delineating a *philosophical* problem of the external world, and sketching a proper *philosophical* answer to such a problem. This is an explicit attempt to delineate the bounds of philosophy. Such a delineation has specific implications for the way we approach and answer philosophical problems. We have already seen an example of this in the last section. Depending on how one views the relationship between philosophy and psychology or physics, one will take certain things as given rather than others. As we shall now see in this section, identifying the essence of philosophy with logic is also an indirect attack on philosophers like Stout and Alexander, and their *psychological* construal and solution to *philosophical* questions, like the problem of the external world.

Many commentators of Russell have not spent as much time on his distinctions between what is logically and psychologically derivative or primitive, as on his desire to provide securer grounds for some of our beliefs about the external world.[351] With regard to this distinction, the basic idea is that from our body of common knowledge arise many

beliefs which are derivative. These beliefs arise through various psychological processes, such as the association of ideas, unconscious inferences, memory, habit and other 'extra-logical' processes.[352] These are then psychologically derivative beliefs. Such beliefs are clearly a part of our common repertoire and contribute to our everyday survival, and thus, they are to be given some degree of 'respect'. For instance one such belief is the persistence of physical things when they are no longer perceived by anyone. No one will deny such a belief, according to Russell, but such psychologically derivative beliefs are *also* capable of a logical derivation from our primitive beliefs. It is in providing such a 'logical process' for our psychologically derivative beliefs that we are then at the same time providing a philosophical basis for such beliefs. Doing this would make such beliefs *logically* derivative, and not just an issue for psychological research. This, in short then, is the very task of philosophy for Russell, and the way in which he sets out to distinguish a philosophical answer to the problem of the external world from a psychological one.

It is after this point has been understood that the role of scepticism emerges. Scepticism comes in merely as a *secondary* motivation for providing a logical process for some of our psychologically derivative beliefs. But it seems that even if no such motivation were present for providing a logical process to connect primitive beliefs to psychologically derivatives ones, it would remain a genuine philosophical (logical) task nevertheless – for its own sake. Some may regard the role of scepticism here as rather being relevant for the way we order our beliefs – derivative from primitive. This would be so only if Russell were solely concerned with dividing our beliefs into those which are certain from those which are not. But, it is quite evident that Russell is fundamentally concerned with dividing beliefs into those that are logical from those that are psychological; that is, to distinguish psychologically derivative from philosophically derivative beliefs. But because Russell is here concerned with an epistemological issue, he introduces this secondary motivation as the source of *justification* for some of our beliefs. In other words, it is after introducing the important distinctions of logically and psychologically derivative or primitive beliefs that Russell introduces the idea that those beliefs which are psychologically derivative are also the ones that require justification, precisely because they are most susceptible to doubt.[353] The latter he refers to as 'soft data', and the primitive beliefs that are the basis of these are called 'hard data'. Some examples of 'hard data' are: the 'facts of sense' and the 'truths of logic', along with some basic spatial and temporal relations, and recent

memory.[354] Hard data are those data which are *both* logically and psychologically primitive. This is not to say that what is psychologically primitive is also always logically primitive, for what is derivative psychologically may be taken as primitive logically. It is this point that sets a socio-psychological answer to the question of the external world apart from a philosophical one. For what is required is a logical justification of such psychologically derivative beliefs. As Russell puts it elsewhere, in response to John Dewey's critique of *OKEW*, '"primitive empirical data" may mean primitive in time, or primitive in logic. The logical articulation of a man's knowledge changes as his knowledge increases; at every stage, there will be parts of his knowledge that are logically more primitive and parts that are logically less so. What, at an advanced stage of knowledge, is primitive in logic, may be very far from primitive in time … When I speak of "data", more specifically of "hard data", I am not thinking of those objects which constitute data to children or monkeys: I am thinking of the objects which seem data to a trained scientific observer.'[355] The problem of the external world is properly stated therefore as: 'Can the existence of anything other than our own hard data be inferred from the existence of those data?'[356]

It is pretty clear that anyone who read Stout's works from around this period would be acquainted with his notion of an 'ideal construction'. In relation to the problem of the external world, one may say that it was the most well-worked out notion of construction in use at the time. We have seen how such constructions connect our immediate experience with that which is not immediately experienced, by way of associations, continuity, causation and certain socio-psychological connections. These we may generally refer to as providing a socio-psychological 'process'[357] to justify those beliefs which are psychologically derivative – such as the persistence of things in the absence of any percipient.[358] At least initially, Stout also refers to an 'immediate inference' from what is immediately experienced to those things which are not. This, presumably, is another aspect of the ideal construction. But this inferential aspect is quickly dropped by Stout, and in its stead he suggests that the distinction between what is immediately experienced and what it 'implies' is not 'a distinction between premise and conclusion, so as to constitute what we ordinarily call an *inference*. For inference involves the logical transition from one cognition to another cognition. But the kind of immediacy with which we are here dealing is essential to the being of any cognition at all. It does not belong to the development of knowledge. Rather, it is necessary to constitute the germ from which knowledge may develop.'[359] Stout is thus advancing an answer to

the problem of the external world – the connection between what is immediately experienced and that which is not – by reducing what we know to what is supposed to be most 'primitive in time', pre-cognitive; or as Russell would put it: what is data for children and monkeys. This kind of immediacy is supposed to even provide the ground for knowledge *and* logic.[360] But as Stout notes in the 1913 edition of his *Manual*, these socio-psychological processes are not sufficient to connect our immediate experience with the objects of the physical world.[361] It is for this reason that the socio-psychological process is further infused with Stout's metaphysical 'halo of implications'.[362] This is related to the fragmentary nature of what is immediately experienced and the unity of the universe. Thus Stout's doctrine is vitally concerned with the duality of socio-psychological genesis of our knowledge and with the monistic picture of everything being contained in one whole. These are both fundamentally connected to the pre-knowledge conditions of knowledge of the external world. In other words, Stout is deeply impressed by the idea that the only way in which the primordial connection between what is immediately experienced and the independent not-self can be understood is by taking into account the holistic unity of the universe and all its fragments (like sensible appearances). This is obviously related to the reducible view of relations, which takes relations to be either reducible to the terms of that relation, or to the whole to which the relation itself is related.[363] The 'unity of the universe' is therefore, for Stout, the 'only assignable ground why the immediate experience of the moment points beyond itself.'[364]

I have taken this confusing mixture of psychology and metaphysics to be what Stout calls his 'ideal construction' of physical things. But for our purposes we can now clearly see the thrust of Russell's fundamental point: that the essence of philosophy is logic. From Russell's point of view, then, Stout has neither touched the real philosophical issue at hand, nor has he provided any proper philosophical answer. Instead of providing a socio-psychological justification for our psychologically derivative beliefs, Russell believes that what is required is a logical ordering and justification of such beliefs. The former, Russell says explicitly, is not his question. 'The problem [of the external world in] pure psychology is this', explains Russell: 'How do we, as a matter of history, come by the beliefs we have about material objects? What earlier beliefs preceded those which we now entertain, either in the individual or in the race? What vaguer state than "belief" precedes the growth of even the earliest beliefs? … All these are questions of psychology. They are questions which I, for my part, have not attempted to

discuss. Nothing that I have said on the problem of the external world is intended to be applicable to them.'[365]

Stout distinguishes in psychology, furthermore, that which belongs 'to the *original* in distinction from the *acquired* meaning of sense-experience'.[366] So for example, psychology takes for granted the belief in external objects as a 'datum', that is, something original in the psychologist's stock of foundational beliefs and assumptions. This sets psychology, therefore, apart from metaphysics and epistemology, as the latter two actually critically assess the status of such a datum or belief. As a matter of fact, says Stout, it is the task of the 'Theory of Knowledge' to determine those beliefs which are really primitive from those which are not.[367] Psychology merely begins by assuming a certain set of these two types of beliefs, without further question. This may seem strange, especially when one considers the fact that it is the very knowledge of the external world that Stout tries to account for psychologically in much of his writings. But one must remember, in the writings I have been considering, Stout is critically dealing with such beliefs as a philosopher and not as a psychologist. That is, the problem of 'how the external world is really constituted' is really for him an epistemological question, and not a psychological one, even though he uses psychological 'processes' to answer it.[368]

What is interesting here with regard to Russell is that he actually makes the belief in the external world psychologically derivative, and not primitive. Russell simply claims in a few places that anyone with a knowledge of psychology must admit as much.[369] Stout would have certainly disagreed with this. I think the main difference lies in the way Russell and Stout respectively understand the nature of the relationship between psychology and epistemology. For Stout, on the one hand, epistemology can critically access what psychology takes as primitive, and therefore, it is for epistemology to dig deeper into what is assumed to be psychologically primitive or original. It is no surprise then that Stout appeals to metaphysics in such areas outside of what is psychologically primitive and even pre-epistemic. On the other hand, Russell thinks that in epistemology what is psychologically primitive must be used to logically support what is derivative. Using a logical process, the epistemological task is really to support what is psychologically derivative on the basis of what is psychologically primitive. Psychologically primitive, then, is a given, and is a part of what Russell calls 'the facts of sense'. Such data, as he reiterates in his response to Dewey, are primitive for the man of science, and not necessarily primitive in time. The implication here for our understanding of Russell

is that epistemology works within the bounds of logic and psychology. It is in this sense that he refers to the epistemological problem of the external world as a 'problem of mixed psychology and logic'.[370]

I stress this consequence of the place of epistemology, because it seems some have misunderstood this aspect of Russell. Take for example Fritz's dismissal of Russell's distinctions between logically and psychologically primitive or derivative knowledge; a distinction, he says, 'I cannot, then, see the relevance of the psychological discussion in *Our Knowledge of the External World*; and I shall continue to assume that Russell does not intend to be concerned with a problem wholly or in part psychological'.[371] This is partly because Fritz emphasizes Russell's quest for certainty over and above Russell's concern with philosophical method. 'Without the psychological emphasis', says Fritz, 'Russell's problem, as I interpret it, is to find the "certain" and non-inferential basis of our empirical knowledge, and to show how the remainder is founded upon that basis. But the discussion of psychologically prior data implies that the problem is one for which we need to conduct the psychological investigation into what elements actually come first in our obtaining knowledge.'[372] My discussion above, especially in relation to Stout, shows how this might not be the correct picture. What I have emphasized is that even though Russell is concerned with scepticism, he is more fundamentally concerned with what he regards to be the proper philosophical method. Related to this latter concern Russell even emphasizes the way in which epistemology is bound by logic and psychology; psychology helps to provide a refined view of what we ought to regard as the given in our knowledge. The epistemological task then is not so much to find what is a '"certain" and non-inferential basis', as it is to 'justify' using such a basis *and* 'logic' in what is considered to be inferential knowledge (which is also, it seems, pin-pointed by psychology and the sceptical method). For such inferential knowledge must be logically justified and not merely postulated. This is done by logically constructing the objects of this knowledge.

What sets this philosophical task apart from psychology, then, is not only the notion of justification or verification, but also the idea that the problem and the solution may be offered in terms wholly logical. That is, we are entirely bound by the 'logical process', rather than the psychological one. Where Fritz goes wrong, therefore, is in thinking that one can go beyond the parameters of psychology and logic into epistemology. In other words, he seems to suggest that epistemology can go it alone in finding what is given and certain in our empirical knowledge, without the help of psychology. Fritz, not unlike Stout, in

Russell's words, is illicitly going 'outside' of common knowledge.[373] I will now turn to an aspect of Russell's logical constructions that furthers and essentially distinguishes his use of constructions from all the rest. Unlike Stout and Alexander's uses of construction, Russell's are infused with certain mathematical developments, and certain devices that give it an exactness, which Russell believed was essential to philosophy. It was especially these aspects of Russell's notion of construction that had far-reaching consequences for early analytic philosophy.

6
The Method of Logical Construction

Many in the Controversy proposed some sort of construction as an answer to the problem of the external world. Stout, Alexander and Nunn tried to do this explicitly to eschew inference and mere postulation, in order to find some more holistic and fundamental way of connecting our immediate experiences to the physical world. But we have also seen some of the limitations of these constructions, such as the open reliance on wholly psychological processes, and the general and sometimes incomplete procedure of these constructions. This latter point is important to stress, because as we shall now see, Russell believed he could provide a more definite procedure of construction. Russell made both these points, against those in the Controversy, after describing the general details of his logical constructions, he says in *OKEW* that the

> problem which the above considerations are intended to elucidate is one whose importance and even existence has been concealed by the unfortunate separation of different studies which prevails throughout the civilized world. Physicists, ignorant and contemptuous of philosophy, have been content to assume their particles, points, and instants in practice, while conceding, with ironical politeness, that their concepts laid no claim to metaphysical validity … Psychologists, who have done invaluable work in bringing to light the chaotic nature of the crude materials supplied by the unmanipulated sensation, have been ignorant of mathematics and modern logic, and have therefore been content to say that matter, space, and time are 'intellectual constructions', without making any attempt to show

> in detail either how the intellect can construct them, or what secures the practical validity which physics shows them to possess. Philosophers, it is to be hoped, will come to recognise that they cannot achieve any solid success in such problems without some slight knowledge of logic, mathematics, and physics.[374]

The question that arises is how does mathematics and 'modern logic' contribute to the solution of the problem of the external world? More specifically, what role does mathematical logic play in Russell's constructions? There will be two directions I shall take in this chapter. The first will be to say a few things about how generally the notion of 'construction' is related to the mathematical tradition, as opposed to say the psychological one, and how Russell might have seen the former to be related to the philosophical problem of the external world. The second direction is related to the first; it will bring in the parts played by the principle of abstraction and the logic of relations, and their respective roles in setting Russell's constructions apart from others. Both these directions are related in that it was Russell's unique conception of philosophy that allowed him to bring in mathematical methods and logic, in order to provide a solution to a question which was usually framed and solved, as we have seen, within some mix of psychology and metaphysics. Indeed one of the main results of this chapter will be to highlight an analogy that Russell may have seen between the issues already emphasized in the Controversy and certain key developments in nineteenth-century mathematics. This analogy centres on the eschewal of postulation. In fact the methods used to solve the issues involved in the mathematical development could then analogously be used to help solve some of the epistemological issues we have so far been considering. This method was the replacement of logical constructions for inferred or postulated entities.

The last chapter will therefore finally deal with some key issues with regard to Russell's particular method of logical construction. I will try to demonstrate a few things. The first will be the distinctive motivation Russell shared with a particular strain in the history of mathematics. This motive – the avoidance of the postulational method – seeped into his overall philosophy. In this way, to reiterate, I will suggest Russell saw certain analogies between what took place in the history of mathematics and the construal of the issues involved in the Controversy. It is no wonder then that Russell saw an opportunity to apply the methods he used in the development of his mathematical philosophy to the issues concerning the problem of the external world. This will lead us to the

interesting role played by the principle of abstraction, and to a deeply related concern Russell had with the logic of relations. For it was these related concerns that provided Russell with a *procedure* of construction that was lacking from the various types of constructions so far considered.

6.1 A mathematical development

Since Euclid's *Elements*, constructions have had a long and veritable history in mathematics. I do not wish to get into the particulars of this detailed history. Rather, I will focus on a certain period of mathematical history that seems to provide an interesting analogy to a part of our discussion so far. More specifically the history of nineteenth-century mathematics is enormously interesting in some of its transitions; especially in dealing with the problem of imaginary elements, and the transition from what has been called the 'method of postulation' to the methods of implicit definition and of construction.[375] I wish to suggest that this development is partly analogous to some of the intuitions of the Controversy. Since Russell was intimately familiar with the former mathematical development (and even a later integral part of it), he readily may have seen this analogy with the construal of the issues in the Controversy. Before I get into the details of this analogy, let me give a sketch of this mathematical history and these various methods.

In both analysis and geometry certain elements are introduced that require some justification. Such elements as 'imaginary numbers' ($i = \sqrt{-1}$), 'negative quantities', and 'imaginary points, lines, planes', are all elements introduced into the body of mathematics by the natural extension of ordinary operations and rules. That is, those operations and rules which led to veritable results involving real numbers and real elements, are also those operations and rules that eventually led to such imaginary elements. But justification for such imaginary elements was required, because historically both analysis and geometry were defined by a certain subject-matter. Mathematics was considered the 'science of magnitude'. Euler, for example, states this orientation quite nicely when he says, everything in mathematics 'will be said to be magnitude, which is capable of increase or diminution, or to which something may be added or subtracted. Thus a sum of money is a magnitude …'[376] From this perspective numbers are conceived to be an answer to the question 'how many', and extensive measures to be an answer to the question 'how much'?[377] Positive integers are then the paradigm case of number.

Entities such as 'negative quantities' or 'impossible numbers' are nonsense from such a perspective. As John Wallis, the great English mathematician of the seventeenth century, put it, 'it is also Impossible, that any Quantity can be *Negative*. Since that it is not possible that any *magnitude* can be *Less than Nothing*, or any *Number Fewer than None*.'[378] The same sorts of issues occurred in geometry, where, as Poncelet explains, one 'always reasons upon the magnitude themselves which are always real and existing, and one never draws conclusions which do not hold for the objects of sense, whether conceived in imagination or presented to sight'.[379] So that when entities such as 'points or lines at infinity' are introduced using certain geometrical operations or transformations, mathematics is faced with objects that are not 'real' in this sense. Other than the *usefulness* of such 'imaginary' or 'impossible' elements, which was the main non-logical reason many mathematicians continued to use such objects, how may one logically justify or logically demonstrate the proper introduction of such suspicious and doubtful entities?

Historically there are three methods used in the attempt to justify the introduction of such imaginary elements: the method of postulation, the method of implicit definition and the method of construction. I will only very briefly touch on each here. The point I wish to make is that exactly like in this mathematical development, Russell eschewed the method of postulation, not only in his logicism, but also in his attempt at solving the philosophical problem of the external world. As Russell construes it, the latter epistemological problem also deals with doubtful objects such as 'physical things', which are to be constructed, rather than merely postulated or inferred. The point of such a discussion, then, will be to connect Russell to the mathematical tradition of constructions (especially that of the nineteenth century), and to show that he also eventually saw the philosophical problem of the external world as involving similar issues. The latter point, I will urge, was partly due to the way in which the Controversy itself was construed and what it noticeably assumed.

The first method used to justify the introduction of 'imaginary elements' into mathematics was the method of postulation. In many cases this introduction was merely implicitly assumed, but what it amounted to was the postulated existence of such entities without any definition of them. The same operations, transformations and rules which applied to the 'real elements' of mathematics, could be applied to such 'imaginary elements'. Since the 'existence' of such elements was what was postulated, it was common to ask on what basis such existence

was secured. It was really the failure to provide a logically convincing answer to such a question that led to the problems associated with the method of postulation. One important attempt to secure such entities was made by J.V. Poncelet, and published in 1862 in a treatise entitled *Applications d'analyse et de géométrie*. In this work, Poncelet sets out to discover the real source of algebra's power over that of synthetic geometry. He proposes that the real power of the algebraic method lies in its employment of 'abstract signs, [which] represents magnitudes by letters which have no fixed values and which permit the magnitudes to be as undetermined as possible; consequently, algebra operates and reasons equally well on signs of non-existence as well as on signs of real quantities … The conclusions drawn [in algebra] must, therefore, possess this same generality, and can comprehend all possible cases, for all values of the letters which are involved. We thus obtain certain remarkable expressions, creatures of the brain (*êtres de raison*), which seem to be the exclusive possession of algebra.'[380]

In order to capture this power for the purposes of geometry, Poncelet proposes a generalization of the methods of synthetic geometry. This is accomplished using what he calls the 'principle of continuity'.[381] Just as algebra operates using abstract signs, Poncelet suggested that the operations of geometry could be applied to the actual diagrams used in geometry. The principle of continuity arises from the idea that instead of taking diagrams to be the subject-matter of geometry, they may be rather regarded as themselves being complex signs whose parts can be operated upon.[382] 'The principle of continuity', says Poncelet, 'considered simply from the point of view of geometry, consists in this, that if we suppose a given figure to change its position by having its points undergo a continuous motion without violating the conditions initially assumed to hold between them the … properties which hold for the first position of the figure still holds in a generalized form for all the derived figures.'[383] The same level of generality, therefore, is maintained throughout all sorts of transformations that observe the given conditions. This is done through the discovery of invariant properties. Such a principle then immediately leads the way to certain imaginary elements, or 'paradoxical results', such as: two parallel lines intersecting at a common point at infinity, or two circles always having two common points at which they intersect, even when they 'really' do not overlap.[384]

It was as a consequence of such generalizations of traditional geometry that Poncelet also happened to postulate the existence of such 'imaginary elements'. As a generalization or extension of the old geometry, Poncelet considered such new elements as providing us with new facts about

ordinary lines and circles. In ordinary geometry two lines or two circles do not always intersect, but the principle of continuity introduces a new *kind* of 'point', in order to accommodate an apparently new fact about ordinary lines and circles: that they do always intersect when we generalize from the particular cases. According to Poncelet, it is exactly this sort of generalization that allows algebra to postulate imaginary numbers, for, 'it is not the explicit introduction of the creatures of the brain', explains Poncelet, 'which has led to the principle of extending the formulae of analysis; on the contrary, the implicit use of this principle has led to these creatures of the brain and in general to all the metaphysical notions which necessarily follow from it'.[385]

As such, Poncelet saw the principle of continuity also as a justification for the imaginary elements. That is, the principle of continuity can be seen as a principle of inference, which 'conclude[s] that a property, found to obtain when the parts of a figure satisfy certain initial conditions, also holds when those conditions are no longer satisfied'.[386] This is exactly how Cauchy understood the principle of continuity when he described it, in his critical review of Poncelet, as *'only a bold induction'*, one that does not secure the existence of imaginary elements.[387] This we shall see is the crucial point against the method of postulation – it does not actually demonstrate the *existence* of the problematic entities.

The second method used to introduce and justify imaginary elements is the method of implicit definition. I will only briefly state what this method involves, because this method has very little bearing on the story I am trying to tell with regard to Russell. Even though Poncelet may have implicitly understood this method of defining imaginary elements, it was his contemporary Gergonne who explicitly described such a method.[388] Gergonne was interested in the ways in which *words* or *signs* are defined, rather than the way in which *things* are introduced. This method found powerful application within mathematics, especially as a method that did not require attention to be paid to the *inner meaning* of signs representing both existent and non-existent elements. Rather a 'meaning' can be given to any mathematical sign 'by specifying in detail the relations into which it enters with other expressions, the rules of operations with such expressions, and the conditions of application to which these are subject'.[389] A system of relations and operations, therefore, define the role that a particular sign may play in the system. This is all that is required by a legitimate introduction of a new sign in a system. In such a system we are concerned with the formal relations involved, rather than with any reference that the

system and its elements may have. In this way, then, a system may be formally developed that legitimately defines and thus introduces imaginary elements, without having to determine the reference for such signs. Mathematics, consequently, is no longer linked to a unique subject-matter.

Finally, we have the method of construction. In my discussion of this last method, I will give two brief examples: one will be Von Staudt's construction of imaginary elements, and the other will be that of Dedekind's construction of the irrational numbers.[390] In the simplest and most general terms this method can be described as a logical technique that reduces an element, whose existence is in doubt and is apparently of a different kind from the other elements in the system, into familiar elements that are given and whose existence is already secure. So instead of having to *postulate* an element, which is apparently different in kind from all the others and whose existence is in question, one may simply reduce it to familiar 'real' elements, and thereby avoid the problem of having to explain the element's separate and distinct kind of existence. This way of putting the matter, postulation in contradistinction from construction, was certainly in the forefront of Von Staudt's mind when he constructed imaginary elements in geometry.[391] He thought that imaginary elements were simply postulated into analysis and geometry, because they allowed continuity in the range of 'operations' that could be performed. The method of postulation, however, was inadequate because, as he put it, 'a point is said to be imaginary in analytic geometry when its coordinates are not all real numbers. But in this way it is only the *language* of algebra which is applied to geometry and one has not established the fact that an imaginary point, like a real point, is something independent of the coordinate system. Everyone asks quite justly, where is an imaginary point if we abstract from the coordinate system?'[392] Indeed, the very aim of Von Staudt's project, according to Nagel, 'was the specification of certain geometrical relations between "real" or "actual" elements in the ostensible subject-matter of geometry, so that these relations, whose "existence" was in no way in doubt, could be taken as the matters designated by the expression "imaginary elements" '.[393] Without the technical details involved in this notoriously difficult construction, let me merely sketch what this construction amounts to. The basic idea is this: in projective geometry there is a 'real' relation between 'real' points on a 'real' line that is called an 'involution'. If we take four points A, B, C and D on a line, they are said to be in involution if the ratios AC/CB and AD/DB are AC/CB = – AD/DB. What is interesting about this relation

in projective geometry, as Desargues showed, is that if a perspectivity from a point O casts the points A, B, C and D onto the four points A′, B′, C′ and D′, then the image points are also in involution. As Von Staudt would have put it, the 'cross-ratio' (AC/CB)/(−AD/DB) is unaffected by the perspectivity. That is: (AC/CB)/(−AD/DB) = (A′C′/C′B′)/(−A′D′/D′B′). Another important aspect of involution is that it provides a way of proving theorems about conics, whether ellipses, hyperbolas or parabolas. In this way Desargues was able to beautifully unify the treatment of conic sections. If we call the image point of each given point its 'mate', we find that some coincide while others do not. When a point coincides with its mate, we call it a 'focus' of the involution. Thus an involution has either two foci, or one, or none, and these are respectively known as 'hyperbolic', 'parabolic', or 'elliptic' involutions. Von Staudt then proposes that the elliptic involution has all the properties for imaginary points that are relevant for the purposes of geometry. Thus he identifies an imaginary point with an elliptic involution. 'Very well', declares Von Staudt, 'we will define an elliptic point involution with a sense attached as an imaginary point of the line on which it lies, the same involution with the contrary sense shall be defined as the conjugate imaginary point.'[394] In this way he goes on to construct an imaginary plane, as an axial pencil in elliptic involution and an imaginary line. The result being that every theorem in projective geometry which seems to be about imaginary elements can be translated into demonstrable theorems about involutions of real elements. Nagel's conclusion is exceptionally apt for my discussion. He says that Von Staudt

> showed how well-defined configurations with well-defined relations between them may be 'constructed' out of the initial real elements and their relations; and he proposed to designate these configurations as 'imaginary elements', since the relations between these complex configurations are formally identical with the relations between imaginary elements heretofore regarded as 'existing' in their own right. However, instead of *postulating* the existence of these mysterious and paradoxical entities, Von Staudt simply *defined* or *constructed* complex configurations *within* the original domain of real points with the desired geometrical properties.[395]

I say that this conclusion is apt, because, among other things, I wish the reader to notice that if one were to replace all the occurrences of the term 'imaginary elements' in this quotation with 'physical things', as used by Russell, one would also have a true statement about Russell's

construction of physical things.[396] Russell was also concerned with avoiding mere postulations, by replacing dubious entities with constructions out of 'real' entities. To see this, let us briefly now consider Dedekind's constructions of irrational numbers, for it was precisely on account of certain postulated entities in this construction that Russell saw it as deficient.

The history of suspicion with regard to the irrational numbers is well known. It was Dedekind's aim to finally construct the irrationals so that no question of their existence would arise. 'Just as negative and fractional rational numbers', he says, 'are formed by a new creation, and as the laws of operating with these numbers must and can be reduced to the laws of operating with positive integers, so we must endeavor completely to define irrational numbers by means of rational numbers alone'.[397] Dedekind begins by observing that there are properties held in common between the series of rational numbers R and the points on a straight line L. Dedekind notices, however, that unlike the points on a straight line L, the series of rational numbers R has 'gaps'. This is easily seen when one considers certain incommensurables stretched on the straight line L. 'The straight line L', Dedekind says, 'is infinitely richer in point-individuals than the domain R of rational numbers in number individuals'.[398] He continues: 'If now, as is our desire, we try to follow up arithmetically all phenomena in the straight line, the domain of rational numbers is insufficient and it becomes absolutely necessary that the instrument R constructed by the creation of the rational numbers be essentially improved by the creation of new numbers such that the domain of numbers shall gain the same completeness, or as we may say at once, the same *continuity*, as the straight line.'[399] These irrationals are created, therefore, on the basis of the following principle: 'If all points of the straight line fall into two classes such that every point of the first class lies to the left of every point of the second class, then there exists one and only one point which produces this division of all points into two classes, this severing of the straight line into two portions.'[400] For this principle, Dedekind admits, he is 'utterly unable to adduce any proof of its correctness'.[401] Rather, this principle is grounded on its self-evidence and its obviousness. This principle is stated in terms of a straight line, but it must also find an analogue in the series of rational numbers. That is, every rational number a affects a separation of the system R into two classes such that every number $a1$ of the first class A1 is less than every number $a2$ of the class A2. Such a separation is called a 'cut' and may be denoted by (A1, A2). Thus every rational number produces a cut. 'But it is easy to show', continues Dedekind, 'that there

exist infinitely many cuts not produced by rational numbers.'[402] This is shown by considering the following three possibilities for a cut of which one and only one must hold:

1. There is the largest number *a*1 of the class A1. So for instance, if A1 is composed of all rational numbers ≤1 and A2 consists of all rational numbers >1.
2. There is the smallest number *a*2 of the class A2. For instance, if A1 is composed of all rational numbers <1 and A2 of all rational numbers ≥1.
3. There is neither a largest number in A1 nor a smallest number in A2. This occurs, when, for example, if A1 is made up of 0, all negative rational numbers, and all positive rational numbers whose square is < 2, and A2 consists of all rational numbers with square > 2. Thus A1 and A2 include all rational numbers. Since there is no rational number whose square is equal to 2, we are left with an element that produces this cut, and which is neither in A1 nor in A2.

While the first and second possibilities are cases in which rational numbers account for the cut, the last cannot be accounted for in the same way – there is no rational number which produces this cut. Dedekind proposes that this last kind of cut be simply the definition of an irrational number. Dedekind has therefore constructed an irrational number using familiar elements – in this case an infinite set of rational numbers. 'Whenever, then,' summarizes Dedekind, 'we have to do with a cut (A1, A2) produced by no rational number, we create a new, an *irrational* number *a*, which we regard as completely defined by this cut (A1, A2); we shall say that the number *a* corresponds to this cut, or that it produces this cut. From now on, therefore, to every definite cut there corresponds a definite rational or irrational number.'[403]

Let us now move to Russell's criticisms of Dedekind's construction. This will be an instructive exercise, because it will nicely demonstrate Russell's reasons for his aversion towards postulation and inference. After giving a sketch of Dedekind's construction of the irrational numbers, Russell gives his general impressions: 'The present theory is designed to prove the arithmetical existence of irrationals. In its design, it is preferable to the previous theories; but the execution seems to fall short of the design.'[404] What makes it preferable is the intent of Dedekind's theory of irrationals, which is to provide a construction of these entities, rather than merely posit their existence. This is something

Russell recognizes as a laudable intention, but one he accuses Dedekind of not successfully fulfilling. For one thing, Russell does not find Dedekind's principle, quoted above, to be self-evident. Even after a couple of proposed amendments to the principle Russell has to conclude that he 'cannot see any vestige of self-evidence in such an axiom, either as applied to number or as applied to space'.[405] Like Cauchy's objection to Poncelet's principle of continuity, Russell here seems to also take Dedekind's 'axiom' as a principle of inference, and, as such, no less dubious in its role in the proposed proof for the *existence* of irrational numbers. Indeed, both Poncelet's principle and Dedekind's may be taken as general principles of continuity.[406]

The primary reason for the failure of inferences based on such principles given by Russell in *PoM* is simply that such arguments are 'powerless to show that x is truly a number. They [such arguments from inference] might equally well be regarded as showing the inadequacy of numbers to Algebra and Geometry.'[407] Aside from this attack on Dedekind's reliance on such a principle, Russell's primary objection is that Dedekind has not established the *existence* of irrational numbers, but rather, has implicitly done what he wished to avoid: he has merely postulated their existence. 'What right', asks Russell, 'have we to assume the existence of such numbers?'[408] With regard to Dedekind's construction Russell thinks that we have no such right, and this is because Dedekind's theory of irrationals 'depend[s] upon limits'.[409]

To understand how Dedekind's definition of irrationals is linked to the concept of a limit, let us take the cut (A, B), and if each of these classes are infinite and denumerable, then we obtain a denumerable series of numbers an , which all belong to the class A, and a denumerable series of numbers bn that all belong to the class B. Each an and bn are then both 'continually approaching' one another. 'Thus', explains Russell, 'the a's and b's are both convergent. Since, moreover, their difference may be made less than any assigned number ε, they have the same limit, if they have any. But this limit cannot be a rational number, since it lies between all the a's and all the b's. Such seems to be the argument for the existence of irrational numbers ... *But the existence of a limit, in this case, is evidently a sheer assumption*.'[410] This is so for two related reasons. The first has to do with the fact that 'a limit demands a larger series of which the limit forms part. To create the limit by means of the series whose limit is to be found would therefore be a logical error'.[411] In other words, the existence of the limit must be proved independent from the series of which it is a limit. So the above given definition of irrational numbers, says Russell, 'cannot

prove that a limit exists, but only that, *if* it existed, it would not be any one of the *a*'s or *b*'s, nor yet any other rational number. Thus irrationals are not proved to exist, but *may* be merely convenient fictions to describe the relations of the *a*'s and *b*'s.'[412] And this leads to the second reason Dedekind's theory of irrationals implicitly *postulates* irrational numbers in their construction. We are led into a vicious circle, where unless irrational numbers 'are independently postulated, the series in question cannot be known to have a limit; and a knowledge of the irrational numbers which is a limit is presupposed in the proof that it is a limit'.[413] Dedekind has implicitly postulated the existence of irrational numbers in his constructive proof of their very existence. This is partly due to the very nature of irrationals, because they are supposed to be 'no longer of the same kind'[414] of thing as are rational numbers; they require an independent treatment from the series which they limit. No such independent treatment is forthcoming, according to Russell, without bringing into the proof a questionable assumption such as Dedekind's principle (or 'axiom', as Russell calls it).

So how does Russell propose to provide a better construction of the irrational numbers, without tacitly postulating them? One path that Russell recommends we follow are the true aspects of Cantor's suggestion with regard to limits. 'By proving', summarizes Russell, 'that two fundamental series may have the relation of being coherent, and that this relation is symmetrical and transitive, Cantor shows, by the help of the principle of abstraction (which is tacitly assumed), that two such series both have some one relation to one third term, and to no other. This term, when our series consists of rationals, we define as the real number which both determine … But the principle of abstraction leaves us in doubt as to what the real numbers really are … In this doubt as to what real numbers may be, we find that segments of rationals, as defined[415] … fulfill all the requirements laid down in Cantor's definition, and also those derived from the principle of abstraction. Hence there is no logical ground for distinguishing segments of rationals from real numbers.'[416] But what Russell further notices is that 'segments will do all that is required of irrationals … I conclude, then, that an irrational actually *is* a segment of rationals which does not have a limit; while a real number which would be commonly identified with a rational is a segment which does have a rational limit'.[417] That is, for his construction of the irrational numbers out of segments of rationals, Russell does not have to introduce any new set of entities, nor any dubious principle of inference or continuity.

Notice the mention of the so-called 'the principle of abstraction', which Russell says Cantor tacitly assumed. Indeed, this principle is supposed to be fundamental to Russell's project of ridding mathematics of metaphysical postulations, and goes as far as to say that the principle of abstraction, in certain cases, 'leaves no doubt as to the existence-theorem'.[418] This last he defines as 'the proof that there are entities of the kind in question'.[419] Before I get into the various features of the principle of abstraction, let me say a few words about how Russell actually saw an analogy between what I have described as the method of construction in the history of mathematics, and the problem of the external world in the Controversy.

It should be clear by now that a feature of the Controversy was the attempt to provide some connection between what is supposed to be immediately given in sense-experience to what is not immediately given, without assuming the latter in the explanation. Stout began by making this link an inferential one, based on the idea of uniformity. This he partly gave up, however, for a constructive approach, which links sensible appearances to independent not-selves, based on a primordial and metaphysical connection. As we saw, Russell considered such an approach to be philosophically missing the mark, but he also saw it to be incomplete, especially with regards to its procedures and methods in constructing the external world. As I have emphasized, Alexander explicitly attempted to avoid 'postulating' physical things in his solution, and considered his New Realism as distinct from Direct Realism (or Old Realism) on this very basis. Alexander did not only, however, fail to escape the psychological sense of construction, as did Stout, but also he failed to go far enough in ridding his solution to the problem of the external world of postulations in need of justification. Nunn, moreover, repudiates science in following philosophy in positing certain elements different in kind from what is given. In Nunn's response to Stout, what he is most critically aware of is the nature of what is supposed to be most immediately given – sense-presentations. But as we have seen, Nunn may not have gone far enough in being critically aware of implicit postulations made in his counter to Stout's Postulate. Implicit assumptions, such as the nature of physical things and the idea of 'the same place', must be further analysed, according to Russell, in order to reveal the real nature of the given.

In a context such as this, where physical things are what are in need of justification, Russell stressed the sceptical aspects of our knowledge of physical things. Like the imaginary elements of mathematics, physical things in epistemology also have a history of suspicion and doubt. To

anybody familiar with the issues not only of this Controversy, but also with the above aspects in the history of mathematics, it would not be difficult to see the parallels between the two. Russell was clearly acquainted with both these two parallel problems of justification and existence, and it is then no surprise that he would attempt to apply the methods of one to the other. Those methods that found such powerful application in the history of mathematics could, Russell thought, be equally well applied to problems that were quite clearly analogous in philosophy. Doing this would also provide an explicit logical technique in constructing entities, something that other constructions, as we saw, either lacked or relied too heavily on psychological methods. This technique relies a great deal on the logic of relations, but I must make a few remarks before I continue.

We have seen that it was between *PP* (1912) and *RSDP* (beginning of 1914), that Russell became acquainted with Nunn's paper of 1910, a paper that presented a defence of Alexander against the views of Stout. Even though Russell was most certainly familiar with Stout's earlier work, it was certainly through Nunn that Russell became acquainted with the Controversy. In the transitional paper *OM*, not only does Russell first explicitly mention and positively use Nunn's work, but he also draws on it to explore the procedure and methods of construction, especially in contradistinction to inference.[420] It is during this period that Russell begins to formulate the question of matter and the external world in terms of the dichotomy between construction and inference. That is, he openly says that there are two alternatives open to him with regard to the problem of matter: Either he can give a 'logical construction' of matter, or he can give 'some *a priori* principle by which, from sense-data, we can infer the existence of entities of a sort with which we are not acquainted …'[421] In *OM* he is still open to *both* approaches being viable ones. As we know, however, he opts for the constructional method in his *RSDP* and thereafter, and regards the inferential or postulational method as no longer feasible. Russell has thus arrived at the same method as the one he preferred in his mathematical philosophy: the constructional.

Recall, however, that *RSDP* was written in the early part of January 1914, and that by this time he had already written *PP* and *OM* (along with many notes and the lengthy manuscript *TK*) all centred on some of the issues of the Controversy. This path to the constructional method, and the concomitant rejection of the postulational method in epistemology, indicates a slow realization on Russell's part of the analogy I have been urging between the epistemological problem of the external

world and the mathematical developments discussed. But if I am right in believing that it was in writing *OM* that Russell really became embroiled with the Controversy, this slow realization of the analogy may have actually been induced by considerations brought forth by the Controversy itself. In particular, I believe that it was in seeing the various implicit postulations made in some of the doctrines of the Controversy (like a more stable world, physical things, 'the same place', and the nature of physical things as persisting unchanged in the absence of any perceiver), that Russell might have become clearer and more aware of the analogy.

Finally, we are now in a position to make an important observation about Russell's constructional method in relation to what others in the Controversy called a 'construction'. From earlier discussions it should be clear that both Stout and Nunn generally shared the following view of constructions: when a series of primary data needs to be made complete, consistent or continuous, certain hypothetical entities are introduced in order to effect such a completion. This happens in the everyday psychical life of an individual, and is also methodically used in the sciences; Stout calls such a procedure an 'ideal construction', and Nunn calls it a 'secondary construction'. The hypothetical entities introduced may either be of the same kind as the primary data or not. This distinction is the basis of Nunn's tripartite categorization of different kinds of constructions. What seems to justify these newly introduced entities is their ability to make the data complete, and this is based on the idea of continuity. This is why Nunn stresses the completion of data over the replacement of them. Russell instead *replaces* the hypothetical entity, otherwise introduced, with a certain 'logical fiction' arranged out of primary data, and thereby avoids the mere postulation of the hypothetical entity.

The idea of continuity, as we saw, also plays an important role in the dialectic between Alexander and Stout. Stout's main argument against Alexander was actually based on the idea of continuity between the kinds of entities being considered. Stout argues that in order to make sense of *mental* functions like association and retention, these must be continuous with *mental* presentations. Stout, in other words, thinks that the primary data must be psychical, since this accounts for not only the fundamental functions of the mind, but also the directedness required for those data to point to physical things. For Alexander the continuity required between the kinds of entities involved is between *physical* sensible appearances and *physical* things. One interesting way to assess this dialectic therefore is to consider which position requires

one to make a leap from one kind of entity to another. Alexander's position requires him to introduce an entity of the same kind as his physical appearances. Stout, on the other hand, must eventually jump from a psychical presentation to something physical in order to ideally construct his experience of the world. What accommodates such a jump is a strange metaphysical basis resting on a certain view of internal relations.

What is significant about Russell's work in this regard is his attempt to make clear the difference between the hypothetical form of construction, as assumed by those in the Controversy, and a form of construction which does not include hypothetical entities, but replaces them. It appears that for epistemological purposes he first makes the distinction between hypothesis as an inference and a construction in his *OM*.[422] It turns out that the hypothetical method really is just another form of postulation, it is grounded on an inference, which is usually based on a principle of continuity. For instance, some forms of this method (as in Stout) might assume that the world must be consistent, or some principle of sufficient reason might be assumed. Whatever the case may be, it is meant to fill in the 'gaps' of experience and make them 'complete' or 'consistent' with other facts. That this form of reasoning about experience is really mere postulation should be clear from my discussion above of Dedekind's construction of irrationals. Dedekind's very motive for accounting for the irrationals is based on filling in the 'gaps' he discovers when making a comparison between the straight line L and the series of rational numbers R. The reason given for filling in the gaps rests on a geometrical analogue, one which Russell feels to be illegitimate.[423] In *OKEW* it becomes clearer that what actually needs constructing are the very hypothetical entities posited in order to make complete a series of data. Simultaneously positing hypothetical entities as well as constructing them, as it seems Nunn and Stout did, or just conflating the two, will not necessarily strengthen the case for such entities. Russell does not deny the role of hypothetical entities in the sciences, but only wishes to give a securer *philosophical* basis for such entities. Indeed, Russell's project is partly driven by the need to account for the hypothetical entities of physics and their verifiability. This he thinks can only be done philosophically if they are *logically* constructed.

Finally, I do not wish to suggest that the only way Russell saw this parallel between the mathematical developments described and the problem of the external world was through the Controversy. Indeed, there are other even earlier lines of influence here at work. One such

influence, for instance, is the early logical constructions that Whitehead used to construct various possible physical worlds that mathematical concepts could be applied to.[424] We know this had an impact on Russell. At the same time, it ought to be noted that such constructions were really much more concerned with how mathematical concepts relate to applied physics, and not with justification, our knowledge of the external world and existence. In particular the problem for Whitehead was rather a 'general problem … discussed purely for the sake of its logical (and mathematical) interest. It has an indirect bearing on philosophy by disentangling the essentials of the idea of a material world from the accidents of one particular concept.'[425] Later in the same work Whitehead states, even more explicitly, that the 'relation of a concept of the material world to some perceiving mind is not to be part of the concept. Also we have no concern with the philosophic problem of the relation of any, or all, of these concepts to existence.'[426] Again, I am not denying that such avenues had an impact on the way Russell might have seen the issues at hand. All I wish to propose, therefore, is that along with such influences on Russell, as those of Whitehead, one ought not to forget the influential role of the Controversy. I have tried to simply focus on one of these strains while leaving the others aside in this work.[427]

6.2 The principle of abstraction

There is one major difference, however, in the analogy I have been presenting between the developments of the methods of mathematics and the constructional approach that Russell brought to bear on the problem of the external world. By the time Russell comes to apply the constructional method to the epistemological problem of the external world, he no longer believes that a construction can prove the *existence* of the dubious entity, but that it can only provide a given class or series of given entities that can be used to *replace* this dubious entity. This shift, as we shall now see, rests on a further shift in Russell's understanding of the principle of abstraction. Some important features of the method logical construction will emerge as a result of this discussion. The first will be the way in which Russell proposes that the principle of abstraction actually does provide a proof for the existence of a 'common property'. It will be seen how later Russell repudiates this view of the principle, and rather emphasizes more of a Nominalist reading. Connected to this is the second result of this section, that the principle of abstraction is really a way of avoiding unnecessary

metaphysical postulation. In this way I will try to show how the principle of abstraction is the pivotal idea that links certain motives in Russell's philosophy of mathematics with concerns he shared with some in the Controversy. Finally, we will also come to see, as a result of our examination of the principle of abstraction, the importance of relations in Russell's thought. Among other things, this discussion will help us to see why I think Russell's logical constructions are not phenomenalist in nature.

Let us begin with a look at how Russell's desire to rid mathematics of unnecessary postulates motivates the introduction of the principle of abstraction. The very introduction of this principle by Russell is induced by a critical assessment of Peano's 'definition by abstraction'. The basic idea behind Russell's criticisms of Peano's definition by abstraction is that it does not prove the existence of a new and uniquely individuated entity. Peano's classic articulation of the definition of abstraction runs as follows:

> Let u be an object; we infer a new object, φu, by abstraction. We cannot form an equality:
> φu = a known expression
> since φu is an object *different in kind* from all those we have considered until now. So we define the equality by writing:
>
> $$\mathbf{D}\ h_{u,v} \cdot \delta \cdot \varphi u = \varphi v \cdot = \cdot p_{u,v} \qquad \text{Def.}$$
>
> where $h_{u,v}$ is the assumption about the objects u and v; $\varphi u = \varphi v$ is the equality defined; it means the same thing as $p_{u,v}$, which is a condition, or relation between u and v, having a well known meaning.[428]

So for example, if '$h_{u,v}$' means 'being a straight line', and '$p_{u,v}$' means 'x is parallel to y', we get for **D**: 'If u and v are straight lines, then $\varphi u = \varphi v$ if and only if u is parallel to v;' in this way the equality $\varphi u = \varphi v$ becomes clear: it simply means that 'the direction of u is identical to the direction of v'. In other words, the new entity, the 'direction of x', is defined by abstraction. This new entity, then, is the 'common property' which is supposed to belong to $p_{u,v}$.

Russell thinks this type of definition is logically defective, because it does not uniquely individuate the new entity.[429] This amounts to saying that instead of having proved the existence of a unique entity, such a definition is forced to postulate such an entity, because formally it can only give us a *whole class* of such common properties; it merely picks out one, that is, out of this class of common properties as *the* entity. But

there is no formal device here that actually 'picks out' *the* entity from the class of all such entities constructed using the definition by abstraction. However defective this form of definition may be, Russell believes that there is a valid principle which the definition by abstraction presupposes; this is the principle of abstraction, which Russell nicely characterizes as:

> 'Every transitive symmetrical relation, of which there is at least one instance, is analyzable into joint possession of a new relation to a new term, the new relation being such that no term can have this relation to more than one term, but that its converse does not have this property.' This principle amounts, in common language, to the assertion that transitive symmetrical relations arise from a common property, with the addition that this property stands, to the terms which have it, in a relation in which nothing else stands to those terms.[430]

In other words, we may collect together terms under an equivalence relation, which is symmetrical, transitive and reflexive, such as the relation of 'similarity'. An equivalence relation that collects terms in this way arises from a common property F (this is the new entity being introduced), which is supposed to be common to each and every term in this class.[431] Generally, we may describe the principle of abstraction as follows: Let R be a symmetrical and transitive binary relation; then a one–many relation R* can be defined by the rule that xRy will imply zR*x and zR*y, where z is individuated uniquely by x or y but not conversely. Then z, which is the common property F sought, is the R-type of x. So for example, if R is the relation of *parallelism* between two straight lines, then z is the *direction* of the two lines. 'Thus it is capable of demonstration', says Russell, 'that the possession of a common property of the type in question always leads to a symmetrical transitive relation. What the principle of abstraction asserts is the converse, that such relations only spring from common properties of the above type.'[432] In this way, therefore, using an asymmetrical relation (R*) we are able to individuate a unique entity z, which is the common property F we are searching for. In other words, this asymmetrical relation is the device required to 'pick out' *uniquely* the new entity being defined. It is precisely such an asymmetrical relation that Peano ignores in his definition by abstraction, which, as a result, forces him to illicitly postulate just one unique entity. It is in this way that Russell's principle of abstraction is actually a method of avoiding postulation. As Russell later observes, especially in relation to the general application of the method of

construction, that 'a certain principle called "the principle of abstraction" … might equally well be called "the principle which dispenses with abstraction", and is one which clears away incredible accumulations of metaphysical lumber'.[433]

At least in his *PoM*, using the principle of abstraction, Russell thought that he could determine uniquely a property common to every term in the field of a symmetrical transitive relation. It is in this way that he actually tried to prove logically the very existence of various mathematical entities, such as cardinal numbers.[434] These entities are distinct, independent properties common to certain types of equivalence relations. Here Russell stresses the distinct nature of these entities, and goes as far as to say: 'But a definition so made [using the principle of abstraction] always indicates some class of entities having (or being) a genuine nature of their own, and not logically dependent upon the manner in which they have been defined. The entities defined should be visible, at least to the mind's eye; what the principle asserts is that, under certain conditions, there are such entities, if only we knew where to look for them.'[435] This is certainly in line with the Platonist bent of *PoM* (mainly because the existence of universals is asserted). Russell's early *Platonist* interpretation of the principle of abstraction, is basically one that states that in any case of a symmetrical and transitive relation one can *infer* the existence of a universal, like a class or a common property.[436] There is thus a Platonism here about properties. But as is well known such an interpretation of the principle of abstraction leads directly to some of the class paradoxes. Vuillemin illuminates this point nicely, but very generally, when he says that

> the difficulty in the Theory of Ideas, as described by Aristotle, is just that the set or universal demarcated by any propositional function is both separated as a "new object" from its elements or particulars, and located in them, because it is formed from them by a logical construction supplied from the basic vocabulary. Now, the mathematical antinomies are all connected with the ambiguous use of the notion of a set. For since this notion is in itself abstract, people were tempted to take a set of sets, considered as a universal, and the sets that are its elements, considered as particulars, and to put them on the same level and treat them as objects of the same kind.[437]

With the resulting development of the theory of types and its restrictions, Russell reinterprets the principle of abstraction in a *Nominalist* sense instead. This Nominalist interpretation is later best

articulated in *OKEW*, when Russell explains that instead of an *inference* to the existence of a common property, one may take 'a group of objects [which] have that kind of similarity which we are inclined to attribute to possession of a common quality, the principle in question shows that membership of the group will serve all the purposes of the supposed common quality, and that therefore, unless some common quality is actually known, the group or class of similar objects may be used to *replace* the common quality, which need not be assumed to exist'.[438] In the same work, a little later, Russell explains the benefit of such a procedure: 'Since there certainly is the class, while any other common property may be illusory, it is prudent, in order to avoid needless assumptions, to substitute the class for the common property which would be ordinarily assumed … In the absence of special knowledge [of the existence of a common property], therefore, the method we have adopted is the only one which is safe, and which avoids the risk of introducing fictitious metaphysical entities.'[439]

What has happened here to the principle of abstraction is interesting for our purposes. Instead of now advocating the relation between the principle of abstraction and the *existence* of a common property, as does Russell in *PoM*, the principle becomes a way of showing how the supposed common quality may be *replaced* by the class of terms which constitute the field of the original equivalence relation. As we have seen above, in the case of matter and physical things, these are constructed out of sense-data that are collected on the basis of an equivalence relation, that is, the relation of similarity. Instead of then *inferring* a common property (in this case a physical thing) from this class of sense-data, we merely replace the former for the class, which formally has all the properties required for any statement about physical things in physics.

This has the resulting aspect of not only being no longer a proof for the existence of the relevant common property in question, but it also no longer emphasizes the role of asymmetrical relations in this regard. In the Nominalist interpretation of the principle of abstraction the feature now emphasized is the respective class in terms of 'conceptual economy'.[440] In these aspects, then, Russell is really (in line with the mathematical tradition of construction outlined above) being consistent with his distaste for illicit postulation and inference to entities of a different kind from the given type. And it is in this way that Russell's method of construction in mathematics is linked to the constructive methods used in solving the problem of the external world. The exact method, or procedure of construction, is therefore deeply linked to this principle of abstraction. As we shall see anon, and as it should be

clear from the examination already given, this procedure is also then related to Russell's logic of relations.

There are two further points that need to be discussed. The first is that, in what Hager calls the 'nominalist turn' in Russell's interpretation of the principle of abstraction, the commitment to universals such as properties is certainly given up, but his commitment to other sorts of universals such as relations is *not* given up.[441] The second point has to do with the way in which Hager construes this 'turn' as a break in Russell's early and later philosophy. This I will argue is really only a matter of emphasis, and not a break. I will now deal briefly with the first point.

One certainly cannot overemphasize the role that relations play in Russell's general philosophy (including his mathematical philosophy). Indeed, according to Russell, 'the importance of relations [is really] a matter which concerns philosophy and mathematics in equal measure'.[442] I cannot embark on an elaborate study of the role of relations in Russell's overall philosophy here.[443] But let me say a few words about the fundamental nature of relations in Russell's thought, especially in relation to logical constructions. Relations play a central role in the principle of abstraction itself. The principle, to be sure, was construed early on as a mechanism to reduce symmetrical and transitive relations into asymmetrical ones, because asymmetrical relations were considered the most fundamental of the relations. This was not only done in light of Russell's desire to find the most fundamental aspects of mathematics in logic,[444] but was also an expression of his belief in the real and distinct existence of relations.[445] This understanding of relations was partly due to Moore's early influential paper 'The Nature of Judgment', which helped to lead the way for Russell's abandonment of the British Hegelian tradition.[446] To make a long and complicated story short, suffice it to say that when Russell discovered the asymmetrical relation, a relation that is irreducible to the subject-predicate form of judgement in classical logic, he came to take seriously relations in their own right. Other forms of judgement thus also became possible (*contra* Syllogistic Logic). The irreducibility of relations, especially the asymmetrical ones, was found by Russell to be incompatible with what he interpreted as the dominant view of relations at the time. This 'common opinion' has two ways of dealing with relations.[447] The first Russell calls the 'monadistic' reduction of relations, which reduces the relation to intrinsic properties (non-relational qualities) to its terms singly. This view Russell especially attributes to Leibniz and Lotze. The second is to reduce any relation to a whole, which is comprised of all its terms. This is the 'monistic' reduction of relations, which

Russell attributes to Spinoza and Bradley.[448] So for example, as we saw in the first chapter, Stout's metaphysical reasons espoused for the fundamental relation between fragmentary presentations and the unity of the universe (to account for the necessity of presentations to always 'transcend' themselves) is based on the monadistic doctrine of relations.[449] It is this monadistic view of relations which is Stout's metaphysical glue for his constructions.

At any rate, both these doctrines Russell rejects on the basis that they are unable to account for, in their respective ways, certain asymmetrical relations.[450] He says in conclusion that we 'have now seen that asymmetrical relations are unintelligible on both the usual theories of relations. Hence, since such relations are involved in Number, Quantity, Order, Space, Time, and Motion, we can hardly hope for a satisfactory philosophy of Mathematics so long as we adhere to the view that no relation can be "purely external" '.[451] Indeed, one of the reasons why Peano missed the valid presupposition in the definition of abstraction (namely the principle of abstraction) according to Russell was that he did not sufficiently realize the significance of the logic of relations, and especially the role of asymmetrical relations, for the philosophy of mathematics.[452]

The logic of relations and the fundamental nature of the asymmetrical relation also plays an important role in other parts of Russell's overall philosophy. From his distinctive understanding of *a priori* knowledge[453] to the construction of matter, Russell is concerned to show the significant role of relations in his philosophy. What I will be concerned with, however, will be what I think is most relevant for his logical constructions of the external world. First of all, Russell believes that along with sense-data (particulars) we are also acquainted with relations (universals). The kinds of relations that we are actually acquainted with, for instance, are spatial relations, time-relations and relations of resemblance or similarity and non-similarity.[454] These latter two are of considerable importance for the construction of space, time and matter. Furthermore, even though such universals are not in space or time, and not in the mind, we may still be acquainted with such subsistent entities.[455] So according to Russell, 'we must admit that the relation, like the terms it relates, is not dependent upon thought, but belongs to the independent world which thought apprehends but does not create'.[456] This point is noteworthy not only because constructions are not creations, but also because Russell's constructions do not fall into the same trap that Stout thought Kant's constructions did. Recall, Stout believed that Kant's constructions failed precisely because they went from the conceptual order (spatial and temporal relations, for example), which is mind-dependent, directly to a mind-independent realm of existence (like

the world). These are exactly the same failures Russell points out in Kant's constructions.[457] Instead of avoiding this difficulty by introducing a new set of entities to bridge the gap between the conceptual order and the order of existence, as does Stout (his independent not-selves), Russell simply argues that relations are existents in their own right, apart from any mind that might conceive them.[458] More generally, it may be said that there really is no strict distinction between the conceptual and the existential, this Russell early on got from Moore.[459] This realism with regard to universals was a little shaken by the later emphasis on the Nominalist reading of the principle of abstraction. But Russell's realism with regard to relations is something he continued to believe late into his philosophical career.[460]

Along with particulars, such as sense-data, relations are also entities with which we can be directly acquainted. This plays a role in not only establishing links between complex sense-data, but also in the very constructions Russell is concerned with. Relations such as similarity or resemblance help to establish a type of equivalence relation (symmetrical, transitive and reflexive) between classes of sense-data. This, among other things, contributes to the construction of a perspective space, and also to the construction of a physical thing.[461] But this is not all there is to the role of relations in Russell's logical constructions. Hager points out that many commentators have missed one of the primary instances of the most fundamental type of relation in logical constructions.[462] Asymmetrical relations, 'the most characteristically relational of relations',[463] according to Russell, also play a fundamental part in the construction of the external world. This fact is nicely brought out in Hager's discussion.[464] He proposes, correctly I think, that there are two crucial distinctions when it comes to the constructions of the three: space, time and physical things. Let us take the case of physical things. The first distinction is the one between a physical thing taken at an *instant* and one taken *over time*. The second distinction that is made by Russell is the one between a viewpoint of only a *single* observer of a physical thing, and the perspective of *many* observers (both actual and possible) of the same physical thing. What results is the following table, after Hager, with some of my own modifications:[465]

A physical thing	**(a) At an instant**	**(b) Over time**
(1) A single observer	A class of sense-data	A series of classes of sense-data
(2) Many observers	A series of classes of sense-data and sensibilia	A series of series of classes of sense-data and sensibilia

Hager thinks that when commentators describe Russell's logical constructions as merely 'classes of sense-data', they are really missing the essential aspect of these constructions. Even a brief scan of this table will reveal that a fuller description of Russell's constructions will have to include the notion of a 'series' or 'order'. Indeed, 2(b) is really, Hager reminds us, the 'full reconstruction of a physical object in the normal sense of that term. The other cases are merely important stages in the exposition of his sense-data theory of physical objects.'[466]

There are two related aspects I wish to note. The first is really to draw the attention to the fact that 'series', as Russell continuously reminds us in many of his writings, is a relation that is asymmetrical, transitive and connected. Such a notion is therefore not only essential to the philosophy of mathematics, especially to the notion of order central to mathematics, but also to the proper construction of physical things, space and time. Once this fact is recognized, a second significant point arises. A series is *distinct* from a class which it orders. Russell is pretty clear about this, for instance, he says that it 'might have been thought that a series should be the *field* of a serial relation, not the serial relation itself. But this would be an error. For example, 1,2,3; 1,3,2; 2,3,1; 2,1,3; 3,1,2; 3,2,1 are six different series which all have the same field. If the field *were* the series, there could only be one series with a given field. What distinguishes the above six series is simply the different ordering relations in the six cases. Given the ordering relation, the field and the order are both determinate. Thus the ordering relation may be taken to *be* the series, but the field cannot be so taken.'[467] Another illuminating way of putting this point is to say that while a class may be constituted by its members, a series is constituted by its members *and* an ordering relation. If the complete logical construction of physical things is a series, then it is constituted by not only its members (such as sense-data, sensibilia and even relations), but also by an ordering relation. Merely enumerating its members would certainly not capture the whole sense of these constructions. Thus I see Russell's logical constructions as not according with the traditional understanding of phenomenalism, which precludes there being more than one *kind* of basic element in the collection of such elements.

I will end this discussion of relations by pointing out that Russell's logical constructions are not mere 'creations', partly because he is constantly dealing with real, mind-independent entities, such as sense-data and relations.[468] Unlike Kant, relations (and especially ordering relations) are really already 'out-there' (so to speak). It is in this sense then that I find it difficult to understand how Russell's logical

constructions can be phenomenalist, in the traditional sense, especially when he is not only dealing with and using non-mental sense-data, but also relations that are independent of the mind and abstract. This point is beautifully illustrated in a metaphor Russell uses to explain the natural arrangement of numbers:

> When we say that we 'arrange' the numbers in these various orders, that is an inaccurate expression: what we really do is turn our attention to certain relations between the natural numbers, which themselves generate such-and-such an arrangement. We can no more 'arrange' the natural numbers than we can the starry heavens; but just as we may notice among the fixed stars either their order of brightness or their distribution in the sky, so there are various relations among numbers which may be observed, and which give rise to various different orders among numbers, all equally legitimate. And what is true of numbers is equally true of points on a line or of the moments of time … The resulting order will be one which the points of the line [for example] certainly have, whether we choose to notice it or not; the only thing that is arbitrary about the various orders of a set of terms is our attention, *for the terms themselves have always all the orders of which they are capable*.[469]

I believe that such a view is also relevant to our understanding of logical constructions. The relations that order the series and classes, in each construction, are ordering relations already present among the terms themselves. We are thus discovering these relations, and not creating them.[470]

I will now turn to the second point I wished to make after I had said a few relevant things about relations. Hager seems to suppose that Russell's later nominalism was an actual radical 'turn' in Russell's thought, one which came after his discovery of the theory of types.[471] This is not quite accurate. Instead, the reading offered by Rodriguez-Consuegra seems to me much more convincing. The latter argues that the 'nominalist' aspect of Russell's principle of abstraction goes as far back as its very first explicit formulation in a manuscript from 1900 entitled 'On the logic of Relations' (even though this aspect may have been later emphasized much more than any other aspect).[472] This fits with some of the things Russell says in *PoM*, where at times he describes the consequences of the principle of abstraction in the following way: 'Whenever Mathematics derives a common property from a reflexive, symmetrical, and transitive relation, all mathematical purposes of the

supposed common property are completely served when it is replaced by the class of terms having the given relation to a given term; and this is precisely the case presented by cardinal numbers.'[473] This fits exactly the Nominalist sense described in *OKEW*. For Rodriguez-Consuegra this point is important to notice, because in the diverse expositions of the principle of abstraction given in *PoM* one can find '*three* underlying version[s]: (1) the older and more philosophical one according to which properties are really other terms of certain relations; (2) the technical one through which equivalence relations may be analyzed into asymmetrical relations; (3) the Ockhamian version allowing the elimination of supposed existing entities by replacing them with the corresponding classes'.[474] While version (2) stresses the reality of asymmetrical relations, (3) emphasizes, as we saw, the respective class as an entity. What is interesting about versions (1) and (2) however is that they are linked to the apparent power of relations to result in new entities. Moore and Russell began to develop a logic of relations that was philosophically based on a view of relations different from those held by, for instance, Bradley. This new way of understanding relations was to take them as substances or entities in their own right – that they could exist independent of their terms. This 'new way to regard relations', says Rodriguez-Consuegra, 'contained recourses leading it to the idea of the appearance of "new" entities as a result of some logical operations. Relative product, for example, seems to produce a new term:

$$x(\mathrm{R} \mid \mathrm{S})z = x\mathrm{R}y \bullet y\mathrm{S}z.$$

In the case of asymmetrical relations this produced the impression of creating *existences* (for instance, "*x* is the grandfather of *z*" means there *exists* a third term *y* which is the son of *x* and father of *z*).'[475] The emphasis later placed on the Nominalist sense by Russell then is a repudiation of this temptation. But what is important here for my purposes is that from early on the principle of abstraction was not only linked to the idea of the existence of certain types of distinct entities, but was also linked to the idea of 'conceptual economy' in the *type* of entities one introduced. Both these aspects, moreover, of the principle of abstraction could be taken as compatible, in their respective senses, with the 'supreme maxim in scientific philosophizing … *Wherever possible, logical constructions are to be substituted for inferred entities*.'[476] That is, if this maxim can be taken generally, it could include either aspect just mentioned of the principle of abstraction. This I hope ought to be clear from my discussion so far. For, both Russell's attempts to provide 'existence theorems' and his desire for 'conceptual economy'

are meant to avoid inference and postulation. Even though both of these motives are present in the principle of abstraction, the first is stressed earlier on than the second. However, when it was discovered that the principle of abstraction not only led to class paradoxes, especially when it was linked to the proof of existence of an entity, and that it also implicitly inserted an illicit inference from the given to the new entity, it was given up for more of an Ockhamian reading. It is 'conceptual economy', therefore, which is emphasized in the works by Russell regarding issues concerning the external world.

My discussion in this section has mainly been to show the link between the mathematical development, concerning the introduction of dubious entities of a new kind, and Russell's aversion to the inference and postulation of such entities. Russell can be seen as taking this mathematical development even further, into the realm of logic. This partly happens, as we have seen, with the help of the principle of abstraction. It is exactly this impetus, to rid mathematics of 'metaphysical monsters',[477] along with some of the general methods used in achieving this goal, that Russell also applies in his solution to (and even articulation of) the problem of the external world. That is, generally speaking, both in certain problems of mathematical logic and in the problem of the external world, it seems one might make illicit use of postulation and inference in their solutions, and both are rather susceptible to similar methods in providing constructions, which not only replace inferred or postulated entities, but also do so in a way that is logically exact. It is then in this way that a knowledge of the methods of mathematics and logic, as Russell says, is necessary to give an exact procedure and meaning to the idea of an 'intellectual construction'. Stout's and Alexander's constructions tend to miss not only the point of these logical constructions, as a replacement of postulated entities with entities already given and certain, but they tend to be also put together using psychological procedures and processes not exact and perspicuous, nor, as a result, even philosophical, in Russell's sense.[478] That is, their constructions either are problems of psychology, or if philosophical, then the methods they offer are unclear. It is only logical methods, as used in ridding mathematics of metaphysical postulations, that are brought to bear, therefore, by Russell on such philosophical problems. Thus Russell could say, in a work concerning our knowledge of physical things, in relation especially to scientific verification which occurs only by means of sense-data, that the

> 'thing' … came to be thought of as something distinct from all [appearances] and underlying them. But by the principle of Occam's

razor, if the class of appearances will fulfill the purposes for the sake of which the thing was invented by the prehistoric metaphysicians to whom common sense is due, economy demands that we should identify the thing with the class of its appearances. It is not necessary to *deny* a substance or substratum underlying these appearances; it is merely expedient to abstain from asserting this unnecessary entity. Our procedure here is precisely analogous to that which has swept away from the philosophy of mathematics the useless menagerie of metaphysical monsters with which it used to be infested.[479]

Conclusion

I would like to end by mentioning some of the broader conclusions we may be able to derive from my examination of Russell's relationship to the Controversy. First, I think it is important to begin by stressing that it was no philosophically simple and direct link that Russell had with the British Empiricists of the Early Modern period, as some have thought. That is, in particular, his philosophy of the external world, and related issues of perception, were not simply a direct descendent and response to the Empiricists of old. Rather, a more fine-grained view arises when one considers the fact that Russell was directly and philosophically engaged with various views taken by his contemporaries, especially the Edwardian philosophers, who had made some significant refinements, advancements and alterations to the Empiricist tradition. Some of these refinements were homegrown, others were made in involved interaction with related, but different traditions. So for example, the 'sensations', 'ideas', and sensible objects of the Empiricists, are actually, as we have seen, conceptually from 'sense-data' and 'sensibilia', which are real and existent physical appearance. With this in mind, I would also recommend caution, therefore, in simply pointing to some superficial similarities between Russell's sensibilia, for instance, and John Stuart Mill's possible and actual sensations.

It was also in relation to at least some of the Edwardian philosophers involved in the Controversy, that Russell expanded upon and contrasted his own method of logical construction. As a matter of fact, I have demonstrated that it was actually through Russell's direct participation with the Controversy that he came to see the potential in the analogy of applying a previously utilized notion of logical construction in mathematical logic, to epistemology and the problem of the external world, in particular. From passages related to this particular method as

applied to the epistemological problems of the external world to the details of his construction of physical space itself, we have seen that keeping in mind these relevant and crucial aspects (especially Russell's connection to the Edwardian philosophers) will also textually help us to explain and interpret many interesting passages in Russell's work from the period. My reading, therefore, tries to soften the overstated emphasis of the British Empiricist tradition on Russell's work during this period (cf. David Pears 1967; Sainsbury 1979; Fritz 1952). This oblique and complicated influence cannot be denied, but what must not be overshadowed by it are the various ways the Controversy significantly engaged Russell. This point becomes all the more significant when one realizes how intently Stout, Nunn and Alexander wished to go *beyond* the Empiricist tradition in their respective solutions to the problem of the external world. Associated with this latter influence is also the impact of the British Brentanian tradition on Russell, via Stout and others.

Consequently, I have attempted to demonstrate the fact that Russell was notably involved, stimulated and influenced by the Edwardian Controversy, and that the role played in the development of Analytic Philosophy by such 'minor' figures as G.F. Stout, Samuel Alexander and Sir T.P. Nunn, G. Dawes Hicks, John Cook Wilson, and so on, must no longer be ignored. In their owns ways, many of these philosophers were attempting to break free from the same kinds of restraints that Russell himself was, albeit in different ways. Instead of elaborating the paths they chose to overcome similar issues as being radically divergent or entirely independent from one another, I have tried to show how at least some of the paths they may have embarked upon conspicuously overlapped, not only with one another, but also with one of the early founders of the analytic tradition. I hope, therefore, that I have given some impetus for further research and examination of these philosophers, especially in relation to the early history of Analytic Philosophy. This kind of impetus is all the more important when one considers that it helps to direct our attention backwards to Analytic Philosophy's crucial connections to other traditions, especially those of the nineteenth century. Indeed, I regard the present work as only a preliminary study of a possible larger undertaking, namely, one that takes seriously the assorted ways the philosophically rich notion of 'construction' was construed and regarded, especially after Kant, in the nineteenth and twentieth centuries.[480] As we have seen, in relation to Russell, such a story would have to regard Stout as a representative, albeit a modified one, of what we may now term an older 'psychological'

brand of construction, having a heritage linked to the likes of Franz Brentano, Hermann Lotze, Hermann von Helmholtz, J.F. Herbart, and, of course, to Kant. But we are also propelled forwards to notice vital ways in which Russell's method of logical construction, especially as applied to epistemology and in light of the 'linguistic turn', played a critical part in the thought of so many of the early proponents of Analytic Philosophy such as A.N. Whitehead, C.D Broad, Norbert Weiner, Jean Nicod, John Wisdom, L.S. Stebbing, Rudolf Carnap, and later, Nelson Goodman, and others. Namedropping is all I can do at this point, for this story still needs to be told. I hope the present contribution makes some fruitful steps, however minute, in both these fertile directions.

Notes

Introduction

1. Nunn (1916, 156).
2. Stout notes this by beginning the paper as follows: 'Both Mr. Moore and I have for many years spent much time and labour on the group of problems which is now to be discussed between us. We initially set out with views so divergent as apparently to exclude all hope of reaching agreement. This is no longer so to nearly the same degree as in the past. We are now in essential agreement on some points on which we once essentially differed' (Stout 1914, 381).
3. Reproduced by courtesy of the University Librarian and Director, the John Rylands University Library, The University of Manchester. Reference: Alex/A/1/1/212/6. I have quoted this letter at length in Chapter 5.
4. Stout (1940, 128).
5. This will be shown in Chapter 2. The papers referred to here must be Alexander's (1909) and (1910), and Stout's (1909).
6. Stout (1940a, 127).
7. Mace (1954, 64).
8. Presentations, as a psychological concept, also plays an important role in James Ward's article for the *Encyclopedia Britannica*. This latter work also is very important in Stout's thought and development. What Stout owes to Ward and Brentano, however, is hard to distinguish at times. Stout, moreover, made important advances of his own, especially with regard to this concept of 'presentations'. I shall not even dare to sift out all the various influences on Stout's notion of presentation, however, in this work.
9. In the subject's ordinary and everyday experience of the world, however, these are simultaneous and, on the most part, the subject is unaware of their procedure and occurrence. It is through 'logical analysis', however, that these are separated into two stages in Stout's philosophical psychology.
10. Stout (1888).
11. For a good discussion of Herbart's doctrine, especially in relation to Helmholtz, see (Lenoir 1997, 142–46). Along with Ward, Stout, it must be observed, led the revolt against a merely physiological explanation of psychological phenomena. In this way, he should radically be set apart from Helmholtz. Further, Stout does not get into the issue of whether or not his constructions of space, time, things, causality are real. But it is clear, nevertheless, that his constructions play a hypothetical role in making sense of our experiences. On the whole, Stout's pronouncements on ideal constructions are few and vague, and sometimes he seems to assume the reader is already familiar with the notion. What I have given

here, and in the rest of the present work, will be only indications, nothing sustained.

12. Mathematical constructions are further divided, especially by these two philosophers, into symbolic and geometric constructions. A history of such constructions, in both philosophy and mathematics still needs to be told.
13. This characterization is taken from Broad (1913), a work that G.F. Stout helped with.
14. One notable exception would be E. Eames' *Bertrand Russell's Dialogue with His Contemporaries*. Also see a great piece, which nicely, but very briefly, sets the stage for my work: Luigi Dappiano, 'Cambridge and the Austrian Connection', in *In Itinere: European Cities and the Birth of Modern Scientific Philosophy*, Edited by Roberto Poli. Amsterdam: Rodopi Verlag, 1997, pp. 99–124.
15. See Hattersley (2005) and Priestley (1970). The former contains, in chapter 17, an interesting discussion of Russell and Moore's philosophies within the Edwardian context.
16. I say roughly, because as we shall see some relevant papers by Russell go well into 1915, and Nunn's article of 1916, even though I consider it a part of this Controversy, was the tail end of it, when many of those involved, including Nunn, had somewhat altered their ideas on the relevant issues.

1 Stout's Proto-New-Realism

17. This article is entitled 'Primary and Secondary Qualities' (hereafter *PSQ*).
18. In *PSQ* we find ideas that go as far back as 1896. What I wish to stress however, is that Stout, in his 1904 paper, initiated not only what I call the Controversy, but he developed here a position, based on some of his older claims, on a purely epistemological question.
19. It ought to be noted that Stout's views, in many ways like Russell's, were continuously evolving and being refined. Any reader of Stout, as any reader of Russell, thus ought to be sensitive to these changes and continual drifts in position. By limiting ourselves to his early material, excluding his essays and lectures after 1915, at least for this chapter, we will try to contain some of his more major shifts.
20. Russell had both these books in his personal library. We know that he read Stout's *Analytic Psychology* in May 1896 (see: 'What Shall I Read?' in Volume 1 of *The Collected Papers of Bertrand Russell*). He also read the *Manual of Psychology*.
21. Seargent (1985, xix). Stout accordingly revolted against some of the long-standing English traditions in philosophical psychology, such as associationism, psychological atomism and mechanism. He also rejected the related German tradition of physiological-psychology and the mechanization of the mind by reduction to natural physical laws (Helmholtz, Wundt); Stout regarded the mind as having laws quite distinct from those of physical objects, in that, unlike the latter, psychical processes are governed

by personal teleology; that is, not by impersonal forces, but by personal interests. He consequently advanced an interesting theory of conation and striving, with an emphasis, like Ward, on attention, and introduced, independently of the Austrian realists, into English psychology the distinction between content (what he called instead, 'presentations') and object, in order to rectify certain problems he saw in Brentano (ref. *Analytic Psychology*; also see his remarks about being independent in this regard in his (1911)).

22. Passmore ('Memoir', xxvii).
23. Seargent (xvii).
24. Metz (1938, 758–59).
25. Metz (749).
26. Metz, 749, fn. It is not at all clear exactly when Stout may have revolted against the English Idealists of the time. His 1896 work definitely contains much by way of being within the tradition of the idealists, but his next major work of 1899, is much less so. What is important, for our purposes is that he was a realist by his 1904 paper.
27. Passmore ('Memoir', xlix).
28. In *My Philosophical Development* (*MPD*, 38).
29. *Dictionary of Philosophy and Psychology*, vol. 2, (1902, 421; entry for 'Realism').
30. Metz himself acknowledges that the label 'Old Realism' is not necessarily a happy one. That the philosophers included under this label 'do not form a definite school or follow a definite tendency. When we include them [however] under the title of "the older realism", we are simply pointing to the fact that they are connected historically or in doctrine with the later or New Realism' (Metz, 479). The philosophers that are included under this label of 'the older realism' are: Shadworth H. Hodgson (1832–1912); Robert Adamson (1852–1902); George Dawes Hicks (b. 1862); Thomas Case (1844–1925); John Cook Wilson (1849–1915) and his students: H.A. Prichard (b. 1871); H.W.B. Joseph (b. 1867); Sir W.D. Ross (b. 1877) and R.I. Aaron (b. 1901). Throughout this book, however, G. Dawes Hicks, will not be treated as an Old Realist.
31. These are at least the ones he mentions by name (Stout 1911, 355–56).
32. This deep kinship with the Brentano school is not an uncritical one, however. After outlining the scheme of Act-Content (presentation)- Object, and its implications, Stout says, 'I have now indicated the general nature of the theory of knowledge in which I, more or less, agree with such writers as Lipps, Meinong, and Husserl. But the copious literature in which this general doctrine has been recently expounded contains many special developments which I fail to follow' (Stout 1911, 357).
33. Stout (1911, 355–56).
34. Such as J.S. Mackenzie, who, it seems, was the first to coin the term 'New Realism'. When he did, in his assessment of it in *Mind* of 1906, he took Stout to be the one to have 'stated the [new] realistic position in its most intelligible form'; but goes on to say, 'and also indicated most successfully how it can be reconciled with idealism' (Mackenzie 1906, 311). He also lists Alexander, Moore and Russell as expositors of this position.
35. Quoted in Stout (1904, 141).

36. Stout (1904, 142). It is interesting to note that already here in Stout, and not only in Moore as is commonly thought, he speaks of the importance of a 'logical analysis' of what the plain man believes (Stout 1904, 144).
37. Locke (bk. II, chap. 8, §§7–15 and §23).
38. Stout (1904, 143).
39. Stout (1904, 142).
40. Stout (1904, 144; my italics); these will play an important role in our story.
41. As Lotze puts it, 'As we have seen, sensation is our only warrant for the certainty that something is. It no doubt at the same time warrants the certainty of our own Being as well *as that of something other than ourselves* … Yet from its very earliest stage it is far from taking these sensible qualities as *identical* with that which it regards as the true Being in them' (Lotze 1884, 41; my italics; Milkov 2008).
42. Indeed, it is partly due to the confusion in terminology between Stout's term 'representation', as used in his 1904, and the doctrine of 'representative content', that he later re-introduces the term 'presentation' in its stead.
43. 'The outcome of our discussion so far is that no knowledge is mediated by contents which have "being only for thought". In this sense of mediacy all knowledge is immediate … there are no merely representative contents, no ideas intervening between the mind and reality. It is the reality itself which appears to us; it is not an appearance (or apparition) of the reality which appears' (Stout 1908, 307).
44. Stout stresses that these contents, or in his terminology 'presentations', are not mere aspects or products of the mental act, nor are they merely the way a thing appears, but are rather independent and distinct psychical existents in their own right. In Stout's own words, presentations have 'an existence and a positive nature of their own, distinct from material things and their attributes … *the sensible appearance [or presentation] is itself something that appears* …' (1905, 155; my italics).
45. 'We know that immanently intended objects are not external objects, that they are not abstract entities like properties or mathematical particulars, and that they are not nonexistent objects ….' (Jacquette 2004, 104).
46. This is primarily because this is how Twardowski and Dawes Hicks both describe this character.
47. Cf. Jacquette (2004, 107–11).
48. Smith (1994, 58).
49. Jacquette (2004, 109).
50. Jacquette (2004, 110).
51. It is quite clear that Meinong and Höfler in their *Logik* made the same distinction to address similar problems at least four years earlier. Cf. Jacquette (2004, 105).
52. Jacquette (2004, 111).
53. Jacquette (2004, 112).
54. After outlining the act-content-object distinction Stout says: 'The general scheme which I have attempted to reproduce in broad outline has for me a special interest, because it is akin to views which I had independently developed in my book on *Analytic Psychology*, which was published in 1896 [in a footnote to this he adds, "I am not claming priority, but only

independence. Priority of publication belongs, I believe, to Zwardowsky"[sic.]]. I there connect my own position with that of Brentano, accepting his distinction between objects of consciousness and the modes in which consciousness refers to its object, but criticizing his failure to distinguish between "Objekt" and "Inhalt". The word which in my nomenclature corresponds to "Inhalt" is presentation …' (Stout 1911, 355–56).

55. Dawes Hicks (1906a).
56. 'But this content ought not itself to be spoken of as a mental fact, as an existing constituent of consciousness; the mental fact, as an existing constituent of consciousness as an existent, is an act of apprehending' (Dawes Hicks 1906a, 280; and 308).
57. 'For … presentations … are not offered data which we have merely to accept, but are themselves in all cases products … In other words, the act of presenting is itself an act of discriminating, comparing, and relating' (Dawes Hicks 1906a, 285; and 313).
58. Dawes Hicks (1906a, 290). I take him here to mean inadmissible in the way Stout and some others make the division, and not necessarily in the role it plays in Twardowski.
59. Stout (1906, 359).
60. Stout himself in this article lists three possible ways of understanding 'content' in relation to Dawes Hicks' argument.
61. Stout (1906, 359).
62. Stout (1906, 359).
63. Stout (1906, 359); This is one instance of Stout's commitment to something like Russell's notion of acquaintance. Another instance will be featured in the beginning of Section 1.7 of this chapter. I also refer the reader to my article, 'Explaining Stout's Reaction to Russell's "On Denoting"' (in a volume entitled *Russell vs. Meinong*, ed. by N. Griffin and D. Jacquette. Routledge, 2008).
64. This is based on the idea of continuity of the type of existents involved. As we shall see in Chapter 2, one of Stout's arguments against Alexander is that this continuity, and thus directness, is not preserved in his doctrine of physical appearances.
65. Stout (1905, 155; my italics).
66. He does not mention Cook Wilson anywhere in this paper, but it is quite clear that he is addressing, in places, some of the problems raised by him.
67. Stout says 'thus we contrast the apparent size of a thing as seen at this or that distance from the eye with its real size as measured in feet or inches' (Stout 1904, 148).
68. Stout (1904, 148).
69. This alternative, as we shall see, is essentially the one developed by Alexander and especially Nunn.
70. 'In general, extension as a characteristic of visual sensation is quite distinct from extension of things in space. And yet if we leave tactual experience out of count, extension as a property of bodies and the space in which bodies are extended *derive* their positive and distinctive content from the extensiveness of visual sensation' (Stout 1904, 151; my italics). How we derive the one from the other might be related to their causal interrelationships, as

Stout states earlier in relation to the representative function that 'the principle of causality underlies the whole procedure' (Stout 1904, 145).

71. Russell uses the same argument for the same end in *PP*.
72. 'That is, our mental attitude presupposes that we see the real extension in real space and not some *simulacrum* of it which is not in any space at all' (Cook Wilson 1904; 1926, 790).
73. 'When we say we *see* A behind *a*, this means that we *see* A in the same direction as *a* from E' (Cook Wilson 1904; 1926, 792).
74. The 'fact is that the observer sees a point in the real extension of a real object in the direction (real) of the line drawn from his eye in real space to the given point in the real object' (Cook Wilson 1904; 1926, 791).
75. Also see Alexander (1914, 8).
76. Stout (1904, 150).
77. Stout (1904, 159).
78. This is also true for Russell. It may have been such a point that both Russell and Stout thought may have saved them from phenomenalism.
79. 'The immediate experience is known only as related to what at the moment is not immediately experienced. Otherwise, there would be no distinction of subject and object, and consequently no knowledge' (Stout 1905, 159). Later in his 1911 paper, Stout links up this notion to T.H. Green. 'Can a bare experience, or, to use T.H. Green's language, a mere feeling, be, by itself, an object of knowledge apart from a thought which transcends it? In denying this, I find myself on ground which has been thoroughly traversed and explored. Little can be added to what has been already urged by Green … The most general reason why a bare feeling, as it is being felt, cannot by itself be a complete object of knowledge is that it is not a proposition…' (Stout 1911, 369).
80. Stout (1911, 369).
81. Stout (1911, 372).
82. Stout (1905, 161); or as he says elsewhere, if 'primary data' are isolated and complete, then 'even the thought of anything that is not being actually experienced at a given moment becomes an impossibility' (Stout 1911, 372).
83. Stout (1905, 161); and: 'The only assignable ground why the immediate experience of the moment points beyond itself is the unity of the universe… We may therefore assume that from the beginning of his conscious life there must be features of his immediate experience which point beyond themselves' (Stout 1905, 161).
84. The problem put this way is obviously related to the way in which Russell was later to articulate his position in 1914.
85. The plain man, he says here, does not confuse 'between qualities of sensation and properties of external things' (Stout 1904, 143).
86. 'Matter as we know it is an actual existence, enduring, changing, acting, and being acted on. It cannot, therefore, be a conceptual order in which content is divorced from existence' (Stout 1905, 158).
87. Admittedly, independent not-self 'transcends' immediate experience. How, then, can we know independent not-self when it transcends our immediate experience? 'I reply that it does not transcend experience in any sense which could make it unknowable. It does, indeed, transcend purely

immediate experience. But purely immediate experience is transcended in all knowledge, even in the knowledge of sensations and of subjective states' (Stout 1905, 158).

88. More on this in Chapter 4, Section 1.
89. For more on this see Chapter 5.
90. Stout (1899, 418).
91. Despite the socio-psychological genesis of these concepts given in the chapter on constructions, there are a few interesting philosophical remarks about space and time. The first is that the physical world does not contain a real point or a real line, but these are ideal constructions made in geometry. The space of geometry is an ideal construction. The second interesting thing to note here is how Stout briefly distinguishes subjective time from objective time. The latter he says explicitly is an ideal construction. The details are sketchy, at least in the first two editions, but it seems constructions here do the work of abstraction so as to accomplish a continuity and objectivity in experience.
92. Preface to the third edition, v.
93. Stout (1913, 436).
94. Stout (1913, 438).

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95. Nunn (1906).
96. Found in his *The Distinction between Mind and its Object* (1913).
97. 'By existential presence I mean the way in which my toothache … is present to me in the moment in which I am actually experiencing it' (Stout 1909, 227). Whatever is existentially present is what he describes as being 'given' in experience (Stout 1909, 229).
98. We know that these independent qualities of a thing are inferences because, for one thing, in order to be able to know them as such they must be conditioned by qualifications of our presentations such as 'a person with normal eyes under certain normal conditions would, in viewing it, have a visual presentation of a certain quality' (Stout 1909, 233).
99. There is one general argument which I do not include in this section. Under the head 'Special Reasons for denying that Presentations are Physical', Stout mentions the form of his general argument here: 'If anything x exhibits variations which are not shared by y, x and y must be distinct existences. But sense-presentations are incessantly undergoing variations which are not shared by the physical things that we perceive by means of them. Hence the sensations must have an existence distinct from that of the perceived things' (Stout 1909, 238). This is the general form underlying some of the other arguments. Stout is then accusing Alexander of not abiding by this general rule.
100. He even says that he availed this opportunity to take his position 'a stage further' (Alexander 1910, 1).
101. 'What I have asserted, proceeding as I think on the basis of description and not on the basis of theory or argument, but of simple observation' (Alexander 1910, 4).

102. Alexander (1910, 2).
103. 'Each of us has his own special interpretation of things. But since our perceptions, images, ideas, notions, are *physical appearances of the same physical thing*, I can control my ideas and sensations and the rest by yours' (Alexander 1910, 21; my italics).
104. The objects or presentations are, however, parts, in some sense, of a physical thing. But as parts, they can be isolated and taken individually, without abstraction or any sort of disfigurement of its nature. Again, this is a point which Russell stressed in relation to the Idealists before Alexander, especially in his work against internal relations. In the same vein Alexander says in this regard, 'when … we consider the relation of the triangle to space or of the individual to society, it may be thought that the constituent is transformed in the complete whole to which it belongs. But in order to justify this conclusion we should need to prove that its absorption into the whole alters the characters which is possess as a part. According as the answer to this question falls out, we have the two opposed systems of absolutism, for which only the complete is real, and of pluralism, which allows to the parts a relative but independent reality' (Alexander 1914, 2–3).
105. 'The most incomplete objects are the objects of sensing' (Alexander 1914, 15).
106. 'To every object', asserts Alexander, 'of which there is consciousness there corresponds some mode or affection of consciousness' (Alexander 1910, 4).
107. 'When I say that in perception an object is revealed; I do not mean, as is suggested [by Stout], that a veil or screen is removed from it. The word is taken from religion where it is used to describe knowledge which is not discovered by the human mind, but is conveyed to it from some mind outside and superior to it … But I speak of these objects as revealed, in order to indicate their externality or non-mentality. I can find, at present, no better word' (Alexander 1910, 3–4).
108. Alexander (1914, 17). This view of the mind, as passive, is assured and explained by Alexander's belief, based on intuition and not on argument as he says, that modes of consciousness have no quality-differences. This means that there is no inherent qualitative difference in the different kinds of mental acts; that these differences are not a mental part of these acts. The upshot is that what distinguishes one mental act from another is the object to which one act is 'directed'. 'I treat them [modes of consciousness]', says Alexander, 'as modifications of mental activity varying subtly with each object … to describe these non-qualitative differences of consciousness, I describe them as differences of direction' (Alexander 1910, 4). This is an important point, because it allows Alexander to differentiate such varying mental acts as conception and perception, simply by their objects, in this case, concepts and percepts, even when these are parts of exactly the same thing or not. This is in direct conflict with Brentano as outlined in Stout's *Analytic Psychology* vol. 1. Stout, there, says that for Brentano, 'Differences in the nature of the object are from this point of view irrelevant. Only the attitude or posture of consciousness towards objects is to be taken into account' (Stout 1896, 40).

109. The reason he wants to avoid this latter meaning is that there are appearances, such as memory-images, which do not coexist in time with the act of memory.
110. Alexander also makes the apt observation: 'I see the table in different perspective according to my position. But this does not prove the visual objects psychical – a mere content, but only that the object looks different from various angles' (Alexander 1914, 17).
111. Alexander (1914, 15).
112. Alexander (1914, 16–17).
113. 'Independent' in this sense is used by Alexander in his 1914.
114. Alexander (1910, 18).
115. Alexander (1910, 15).
116. As Stout puts it: 'For, in order to be retained, knowledge must first be gained; hence if we are primarily confined to knowledge of our own sense-experiences, these may indeed come to mean for us other related sense-experiences, past, future, and possible, but not a world of existences persisting and changing independently of the coming and going of our sensuous presentations. We must, therefore, assume that the simplest datum of sense-perception from which the cognition of an external world can develop consists, not merely in a sensuous presentation, but in a sensuous presentation apprehended as conditioned by something other than itself …' (Stout 1913, 432).
117. The Old Realism of Cook Wilson, as we saw in the last chapter, is an example of this type of realism. As a matter of fact, this type of realism actually takes the stand that the various appearances of a thing are derived or inferred from the thing with which we are directly related. In Cook Wilson's geometrical counter-example, he tried to explain away Stout's 'apparent extension' by showing how this was redundant to our explanation of an apparent illusion. Indeed, we can explain why something may 'look' or 'appear' smaller from a certain distance than it actually is by showing how the actual thing is geometrically related to the appearance of it. This appearance, Cook Wilson argues, is then simply the implication of certain real relations the actual thing has to other real things (like the body). It is in this way that Cook Wilson thinks he has shown how apparent extension is redundant, and that appearances in general are inferences from what we know about the actual thing and its real relations, which are directly known. To put it in the words of Russell, instead of physical things being functions of sense-data, sense-data are seen as functions of physical things.
118. This way of putting it really conflates, however, two senses of continuity. For in one sense, as Stout constantly urges, the act of sensing, the sensible object and the physical thing are all continuous in our experience, and our ideal constructions. But here, I wish to urge that that the kinds of entities involved are not continuous.
119. As we shall see in Chapter 4, Russell thinks that there is a common 'prejudice' assumed here by both Stout and Alexander. This prejudice regards the characteristic of an unchanged persistence without a perceiver present to be a property of anything physical. If this prejudice is rejected, a new understanding of a sensible object arises. This new understanding helps to distinguish Russell' 'sense-data' from 'physical appearances'.

120. As we shall see, Alexander here is echoing Nunn, who early on put it by saying: 'If this doctrine is true, then there is no such definite gulf between concepts and percepts as is frequently supposed. There is always a reference of the ideal content to the Objective world. In perception the Objectivity of the concept is self-announced and self-guaranteed: in *mere* conception there is no such guarantee of the Objectivity of the ideal content, but simply absence of rejection by the presented Objective of the proffered addition; while in negation there *is* a rejection of conceptual elements which have their proper home in other Objective contexts' (Nunn 1907, 42).
121. This might be similar to saying, as does Russell, the general principles are a priori and independent of the mind (unlike Kant). See last section of Chapter 6.
122. Bosanquet, in his 1913 assessment of Alexander's reply to Stout, remarks, 'the realist of to-day asserts the reality – even the physical reality – of universals. The modern treatment of Plato's Ideas, in this connection, is extraordinarily interesting, but not perhaps as new as it might appear' (Bosanquet 1913, 34).
123. 'But since our perceptions, images, ideas, notions are physical appearances of the same physical thing, I can control my ideas and sensations and the rest by yours' (Alexander 1910, 21).
124. Bosanquet alludes to this positions' uniqueness when he says 'We have of course to resist being led away by the sound of this doctrine, to impute to the realist an extreme idealism. When you read that a physical thing, a material substance, "is made up of *sensa*, *percepta*, and thoughts" you have hard work to remember that for the author all these are the objects of the mental acts, not the acts themselves, and are therefore physical realities, and in no way bits of mind' (Bosanquet 1913, 20).
125. It should be noted, however, Alexander later on in his 1914 does not deny the importance of the distinction between mental act and its object, but says, rather, that the distinction between 'enjoyment' of one's own mind and the object 'contemplated' is 'more fundamental than that of act of mind and its object' (Alexander 1914, 7).

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126. For example, Passmore makes a note of this when he says in passing that Nunn's 1909–1910 paper 'was widely studied both in England where, as we have already noted, it struck Bertrand Russell's roving fancy, and in the United States' (Passmore 1966, 259; also see 238). Metz also makes a passing remark about this influence, when he says, 'Of the same kind [as the relation to Alexander] is his [Nunn's] relation to Russell who also is under a considerable debt to Nunn, and whose doctrine in its extension has reacted fruitfully upon him' (Metz 1938, 683). Both these authors, however, do not elaborate on the details of the ways in which both Alexander and Nunn actually influenced Russell.
127. Passmore (1966, 259).
128. Right at the beginning of the paper Nunn makes it a point to say: 'It is important to make as clear as possible the sense in which I give an

affirmative answer to this question' (Nunn 1910, 191). The clarity of this paper seems to have had quite an impact on Nunn's peers; Schiller declared, 'Dr. Nunn would commit me to a discussion of all the fundamental issues which are raised in his most lucid and forcible paper, which impress me as the most effective presentment of the case for Realism which I know' (Schiller 1910, 218). I think a large part of the clarity of this paper was due to the outstanding lucidity of Stout's 1909 paper.

129. This book is a part of Russell's library, and his characteristic markings can be found in it.
130. But especially Russell as he openly says in his Preface: 'Even my numerous footnote references to the *Principles of Mathematics* hardly suggest the full amount of the inspiration which I have drawn from the work of the Hon. Bertrand Russell. I am conscious of the influence of his mode of thought throughout this book' (Nunn 1907, iii–iv). In a letter to Lady Ottoline Morrell, dated 7 July 1911, Russell actually refers to Nunn as 'more or less a disciple of mine' (see letter 172 in *The Selected Letters of Bertrand Russell*, Vol. 1, p. 381).
131. See the two obituaries on him in the *Mathematical Gazette*, Vol. XXIX, No. 283, Feb. 1945.
132. 'the recognition that in perception the object announces itself as having a certain priority to the independence of our act and that this announcement is itself the sufficient certificate of the object's extra-mental status' (Nunn 1910, 201).
133. As we shall see in the next chapter, Russell does not believe that such a belief is self-evident.
134. *The Aims and Achievements of Scientific Method* (Nunn 1907).
135. However tempted Nunn is to do so, he hesitates to attribute this doctrine to Russell or Moore (Nunn 1907, 142).
136. More poetically, and in recollection of Kant, Nunn says, 'The whole "furniture of earth and choir of heaven", "the starry heavens without and the moral law within", are but items in the inventory of the Objective' (Nunn 1907, 4).
137. 'Attention should, perhaps', says Nunn, 'be called to the fact that the foregoing use of the term Objective differs from the technical use of the same term recently introduced into Philosophy by Meinong and his school. (Meinong's works, Ueber Annahmen, 1902, and Untersuchungen zur Gegenstandstheorie und Psychologie, 1904, have been the subject of review and discussions by Mr. Russell, in *Mind*, N.S., Nos. 50, 51, 52 and 56). In the complete "Theory of Objects" an object (Gegenstand, "an object of discourse") is either an *Objekt* or an *Objektiv*. Thus (to borrow one of Mr. Russell's examples) if I pronounce the judgment "There was no *disturbance*", although I deny the existence of a certain *Objekt* – a disturbance at a particular time and place – I yet assert something positive, namely, the *fact* that there was no disturbance. This fact is the *Objektiv* of the judgment. So, if I assert that "A is the father of B", my judgment concerns the *Objekte*, A, B, and the relationship between them, while the *Objektiv* of the judgment is, once more, the *fact* of the relationship asserted' (Nunn 1907, 8).
138. Nunn (1907, 10).
139. Nunn (1907, 19); this might have been the prototype to Moore's 'sense-data', who introduced the term three years later in a series of lectures.

140. Nunn does speak, however, of 'psychical existents' that 'appear in the 'panorama' surrounding a single centre only'. These are, however, still Objective, and as such, they are 'the same for all', *simpliciter*, says Nunn. (Nunn 1907, 6–7). Another thing to note is that some may take this as an indication that Nunn perhaps did not develop the New Realist position, which took presentations to be non-mental, in his 1906 and 1907, because 'sensational data' are somehow psychical but yet Objective. I do not agree. Nunn and Alexander continuously refer to this earlier work of Nunn's as originating the doctrine of New Realism, which takes presentations to be non-mental. I therefore give Nunn the benefit of the doubt here, even though it is unclear, as I say in what way he regards them to be Objective.
141. Not only is this assumed in arguments used by Stout to show how certain elements in our sense-experience are psychical, but it is also assumed by Berkeley and Locke in their arguments for the psychical nature of certain elements. So in many ways Nunn is attacking this tradition, which takes such an assumption for granted.
142. Or as Nunn says with regard to the colours of a buttercup that it 'actually owns all the colours that may be presented under different conditions, though in actual experience most of them are liable to be degraded to position of symbols of those presented under normal conditions' (Nunn 1910, 203).
143. However, in everyday life, and in science, we do pick out a set of attributes as being really attached to a thing. This is easily explained, says Nunn, by our need to simplify the type of things we wish to deal with. That is, for pragmatic reasons of economy, usually one of a series of qualities is taken as being the one normally attributed to it under normal conditions. This tendency is important, says Nunn, but at the same time it should not compromise the basic understanding of a thing, that it possesses an indefinite series of qualities.
144. In a footnote to this passage, Nunn acknowledges his debt to Moore, especially to the latter's *PAS* 1906.
145. Notice the conflation of 'sensations' (as mental acts) with 'sensible objects'.
146. Nunn (1916, 161).
147. Russell says, that a 'given table will present to one man … brown, while to another, towards whom it reflects the light, it appears white and shiny. It is said, not wholly without plausibility, that these different shapes and different colours cannot co-exist simultaneously in the same place, and cannot therefore both be constituents of the physical world. This argument I must confess appeared to me until recently to be irrefutable. The contrary opinion has, however, been ably maintained by Dr. T.P. Nunn in an article entitled: "Are Secondary Qualities Independent of Perception?" The supposed impossibility derives its apparent force from the phrase: "*in the same place*", and it is precisely in this phrase that its weakness lies … It is the unperceived ambiguity of the word "place" which … has caused difficulties to the realists … Two "places" of different kinds are involved in every sense-datum, namely the place at which it appears and the place from which it appears' (*RSDP*, 153). This is an extremely important passage for my story, its full significance will be detailed in Chapter 5 of this work.

148. Nunn (1910, 201).
149. Nowhere does Nunn explicitly list these requirements in the fashion that I do here.
150. 'but they do show [in the case of hotness] that the plain man's view of a hot thing requires rectifying and supplementing. Not only must the thing be thought of as owning an indefinite number of hotnesses disposed spatially about it; it must also be recognized that the disposition of these hotnesses depends in part upon the hotnesses belonging at every moment to neighbouring bodies' (Nunn 1910, 206).
151. One implication of this is interesting; consider the following example: 'The staff in water is … not really the same thing as it was out of the water. Certain characters of the new thing are identical with those of the old, but its visual characters are changed' (Nunn 1910, 209).
152. 'For example, the magnetic characters of a piece of iron are not all found in the same place as its chemical characters' (Nunn 1910, 209); or as in the case of the tactile sensation in contrast to the visual sensation of a stick bent in water.
153. Surely this is one important way of characterizing the New Realism. Bosanquet, one of the central idealists at the time, in a work composed as a critique of Alexander, admits that New Realism 'gives more to Reality than Materialism' (Bosanquet 1913, 6). This is partly because Materialism, for Bosanquet, is premised on the belief that there is a fundamental difference in kind between primary qualities and secondary ones. The former are independent of the experience, and are in this way 'self-existent properties of things'; while the latter are 'effects produced in our minds … and bear no resemblance to anything in the real external objects' (Bosanquet 1913, 7).
154. Russell later uses exactly the same analogy for his understanding of a physical thing, and he too uses it for a similar purpose; (*UCM*, 77–8).
155. This is even how Passmore characterizes Mach's phenomenalism (Passmore 1966, 109, fn.1).
156. Nunn explicitly brings in the aid of 'a science of psychology' to deal with the construction of these primary syntheses. In fact, as we have seen, and as Nunn was quite aware, this process is linked to Stout's psychologically construed notions of ideal construction. Both Nunn and Stout, therefore, deal with such constructions, on the whole, as largely unproblematic, and requiring no explicit *philosophical* mechanism or exact procedure to be examined or explained. For Russell they become a specific problem of logical constructions.
157. Nunn (1907, 46, sic). Whether this is a particular physical feature of the high altitudes in the Andes, I am not sure, but what is certain is that water boils at lower temperatures at higher altitudes. The example therefore is not very factually clear.
158. Nunn (1907, 46).
159. Nunn sums up: 'The results of the last two chapters may now conveniently be summarised. Starting from the concept of Science as a conative process, which aims at rendering Objective facts intelligible to an individual consciousness, and reaches that end by building up those primary facts into secondary constructions or apperceptive systems, by means of ideas drawn from other contexts of experience, we took up the positions (1) that no

concept is to be deemed essentially incapable of rendering primary facts intelligible on the ground of the context of experience from which it is drawn; and (2) that in no case is the concept of hypothesis to replace, in the sense of accounting for the "reality" of, the Objective facts which it has been employed to render intelligible' (Nunn 1907, 123).

160. Nunn (1907, 128).
161. A subclass of this first type of secondary construction is one where additional elements added to make initial data complete are essentially unverifiable, such as suggesting 'intention' or 'motivation' to make complete a case in court about an accused person's actions. Somehow these additional elements, even though unverifiable, are supposed to be 'of the same order' as the primary data.
162. 3(iii) is interesting from Russell's perspective, because it is actually the exact converse of what Russell believes to be the role of constructions. That is, constructions out of the primary data are what replace the inferred entity. What is interesting, however, is the emphasis Nunn places on distinguishing constructions which include elements of a different kind from those which include elements of the same kind.
163. One of the conditions, as he says, is 'that in no case is the concept of hypothesis to replace, in the sense of accounting for the "reality" of, the Objective facts which it has been employed to render intelligible' (Nunn 1907, 123). It is partly in this way that he shows primary qualities have failed to properly account for secondary ones. Cf. Nunn (1907, 128–31).
164. The details are unclear. The discussion of things here is further confused by the fact, as we pointed out, in the most simple cases (as in the boiling of water in order to soften potatoes) things were seen to be primary constructions. I suppose at some level the distinctions are relative.
165. See remarks made in Nunn (1916, 156).
166. 'It should be noticed that this tendency to replace original sense-data by a mental construction (or "hypothesis") which forms a readier guide to practical or theoretical activity is in another form the characteristic of physical science. In the opinion of some critics of science the practical success of the mental construction here also leads to something very much like illusion' (Nunn 1910, 215; also notice here the use of 'sense-data').
167. I say 'almost' because his allusion to 'existence beyond' sense-data, might plausibly be merely taken as a reference to Stout, and a rejection of some sort of representationalism, and not that a thing is not distinct from its appearances. Also notice here he only includes the sense-data which are perceived; his position is broader, however, as we know, he includes also all those sense-data which are not perceived. These latter are not just 'permanent possibilities', but are actual.
168. Nunn says: 'This attempt to justify common-sense, like the former one, is confronted by difficulties which cannot be overcome without taking the "plain man" through philosophic by-ways where he may feel he has lost touch with the "distinctions that are plain and few" among which he moved at the beginning of his journey. Not only may a vast number of objects of sensational processes have to be thought of as belonging to the Thing although they lie outside the space within which its "primary qualities" manifest themselves (the space which we call "the thing itself");

there is the greater theoretical difficulty of deciding, since no part of the presented world appears to be independent of any other part, what precise relational network so isolates a group of presentations as to constitute them into a Thing' (Nunn 1907, 18).

169. It ought to be noted here, however, that it seems that Stout felt the power of both Nunn's objections, and Nunn's Postulate. This is demonstrated by his later adoption of a different approach to the notion of a 'thing'. See Stout's (1911), but especially the 3rd edition of his *Manual of Psychology* (1913).
170. From Baldwin's Dictionary, for the entry under 'Substance', we find the following description of the then current understanding of this notion: 'In the philosophy of this century, which tends to consider all the existents known to us as largely, if not wholly, phenomenal, substance has been generally regarded merely as the unknowable real existent, upon which in some sense they depend' (614: This entry was written by G.E. Moore).
171. Also see Locke (1690, Bk. II, Ch. VIII, §§16, 57).
172. Berkeley (1734, 76).
173. The following by Nunn then should also be addressed to Locke and Berkeley: Nunn says, 'Unlike Mr. Stout, I can find no more "contradiction" in the simultaneous attribution of the warmth and coldness to the same water than in the simultaneous attribution to it of warmth and acidity. Only empirical experience can decide what qualities it is possible, and what it is impossible, for a body to wear together, and we must admit that experience shows that warmth and coldness simply are not among the qualities which exclude one another' (Nunn 1910, 208).
174. As we shall see it was partly for this reason Russell found Nunn's doctrine attractive in his 'On Matter'.
175. Lotze (1884, §§16, 42, my italics).

4 Russell and the Nature of Sense-Data

176. Hereafter *OKEW*1 or *OKEW*2, depending on the edition used. The latter edition has certain marked changes to it relevant to our discussion.
177. Coffa (1991, 87).
178. Griffin (1991, 35–45).
179. Says Russell in a letter to Alys of 16 May 1894, 'He [Stout] has taken quite an affection for me apparently, as I have for him, though as McTaggart says, he is an acquired taste' (Griffin 1992, 82).
180. Bell (1999, 201).
181. Stout (1896 vol. I, 45).
182. Stout (1911, 355).
183. Stout (1905, 153; my italics).
184. Stout (1905, 151–52).
185. Stout (1905, 153).
186. Stout (1905, 155; my italics).
187. *PP* (12). Russell also says 'Thus it becomes evident', for instance, 'that the real table, if there is one, is not the same as what we immediately experience by sight or tough or hearing. The real table, if there is one, is not *immediately*

known to us at all, but must be an inference from what is immediately known' (*PP*, 11).

188. 'But we cannot hope to be acquainted directly with the quality in the physical object which makes it look blue or red' (*PP*, 34). And thus what is to be noted here for future reference is that like Stout, Russell here believes that sense-data are not to be identified with the real qualities or attributes of a thing in itself. This will change.
189. *PP*, (11).
190. *PP*, (19–20).
191. *PP*, (12).
192. *PP*, (41).
193. *PP*, (20). Russell does not dare say in *PP* that sense-data are thus physical. It is after *OM*, when I believe he became well acquainted with Alexander and Nunn against Stout, that he began to consider sense-data to be also 'physical'.
194. Dawes Hicks (1906a, 285, 292).
195. Dawes Hicks (1912, 436–37).
196. Dawes Hicks, (1912, 437; my italics).
197. Stout (1905, 155; my italics).
198. *NSD*, 187; my italics.
199. Cook Wilson (1904; 1926, 791; my italics).
200. Cook Wilson (1904; 1926, 792).
201. Cook Wilson (1904; 1926, 793).
202. Cook Wilson (1904; 1926, 796).
203. Cook Wilson (1904; 1926, 791; my italics).
204. Technically, sense-data are known by acquaintance, a dual-relation. This makes them, properly speaking, logical names. And thus Russell says that terms like 'existence' or 'inexistence' are not actually applicable to things we are acquainted with, like sense-data, because such terms are only properly applicable to descriptions (*RSDP*, 174–76). Since Russell himself, as we see, uses these terms in application to his sense of sense-data, I will also then continue to do so, with this qualification in mind.
205. Take for example Dawes Hicks' statement: 'This immediacy, however, appears to me to be an immediacy of relationship to the *real thing* perceived, and not of recognition of the psychical state which is occurring in consequence of the stimulation' (Dawes Hicks 1906b, 379).
206. Hager (1994, 122).
207. This came out in Chapter 1, Section 1.4, especially in relation to Cook Wilson.
208. Cook Wilson (1904; 1926, 500).
209. For example, Dawes Hicks' says with regard to Locke's notion of sensation that it is 'an existing fact, it stands between the mind and the external thing, and by its very position there screens the external thing from our gaze' (Dawes Hicks 1906a, 309–10).
210. *NSD*, 187.
211. Even though it is a well-known fact that many of Cook Wilson's 'Tentative Investigations' found their way into the hands of many contemporary philosophers at the time, it was primarily through such notes, and his lectures, that he was so influential, especially in the Oxford philosophical circles.

212. Cook Wilson (1904; 1926, 791).
213. Cook Wilson (1904; 1926, 790).
214. Cook Wilson (1904; 1926, 792).
215. This discussion takes place in *SMP* (114–18).
216. Cook Wilson (1904; 1926, 791).
217. *OKEW*2 (93).
218. *UCM* (142).
219. *PP* (6).
220. Moore (1953, xii).
221. Moore (1953, 30).
222. Moore says in his Autobiography that 'such books as … Stout's *Manual* and *Analytic Psychology* … seemed to me largely to consist of what was strictly philosophy; I had read all these books with a good deal of attention, and a good many of the subjects discussed in them were subjects on which I had thought a great deal and thought as hard as I could' (Moore 1942, 29; Pretia 2008).
223. David Bell briefly makes a convincing case for this (see Bell 1999, 206). But much more work needs to be done in this connection. Also see Pretia (2008).
224. Dawes Hicks (1906a, 277).
225. Alexander (1910, 32).
226. Nunn (1907, 19).
227. Alexander uses the term more frequently in his early 1909 paper. For example, in relation to Stout, he says there, 'That object which is commonly called a presentation I have insisted upon regarding as physical' (Alexander 1909, 23). Nunn, on the other hand, does not uses the term in his 1910.
228. I say here a '*type*' of non-mental presentation because it will soon emerge that non-mental presentations are more akin to Russell's notion of 'sensibilia'.
229. However, see Hall (1964), wherein we are reminded that the first usage of 'sense-data' is to be found in Josiah Royce's *The Religious Aspect of Philosophy* (1885), and thereafter in 1890 in William James' *Principles of Psychology*. Even though the term 'sense-data' is used, however, before Moore's employment of it, my entire point is that the way in which the term is used in the Controversy, including Moore's own usage, is dramatically different from the earlier sense. I thank Nicholas Griffin for pointing out this reference to me.
230. Nunn contributed later in an article published in the 1915–1916 edition of the *PAS*. It explicitly dealt with both Stout's and Moore's contributions to the above mentioned symposium, and also indirectly with Russell.
231. Stout (1905, 158).
232. Stout (1905, 158).
233. *RSDP* (148).
234. *RSDP* (148–49).
235. It is no wonder that Russell would remark, 'I do not know whether realists would recognise such a view as realism' (*SMP*, 123).
236. *UCM* (128).
237. *RSDP* (151).
238. *RSDP* (151).
239. *PP* (20–1).

240. Nor does he anywhere suggest in *PP* that sense-data are 'physical'.
241. *PP* (9).
242. *PP* (41).
243. A notion which he uses with qualification and caution. See *UCM* (134).
244. Interestingly, Alexander has a very similar argument against presentations being mental. See Alexander (1909, 22).
245. *UCM* (135).
246. *RSDP* (149).
247. *UCM* (143).
248. As we saw in Chapter 2, this is Stout's argument (IIa).
249. This argument is mentioned in *UCM* (130).
250. Alexander organized and attended this lecture.
251. *UCM* (142–43).
252. *PP* (46).
253. *PP*, (48).
254. *PP* (47).
255. *OM* (81).
256. *PP* (48).
257. *PP* (58).
258. It is this line of reasoning that leads Russell to conclude that there 'is therefore no *a priori* reason why a particular which is a sense-data should not persist after it has ceased to be a datum' (*RSDP*, 152).
259. *RSDP* (148).
260. *UCM* (128).
261. *UCM* (128).
262. See: *OKEW*2 (93); *RSDP* (173–79); Nunn (1910, 207–17); Alexander (1909, 4, 5–6); and Alexander (1910, 11).
263. Russell says, for instance 'But if, as we have maintained, what is given is never the thing, but merely one of the sensibilia which compose the thing, then what we apprehend in a dream is just as much given as what we apprehend in waking life' (*RSDP*, 174). Or he also says in this regard: 'Objects of sense, even when they occur in dreams, are the most indubitably real objects known to us' (*OKEW*2, 93).
264. In *OKEW* Russell says, 'But what is illusory is only the inferences to which they give rise; in themselves, they [sense-data or what he calls here "objects of sense"] are every bit as real as the objects of waking life' (*OKEW*2, 93). Nunn, for instance, says 'Error here can only take the form of inferring a correlation between visual and tactual and other experiences which does not exist' (Nunn 1910, 209). It may just be that one of the reasons Russell switched from an inferential perspective in *PP* to the constructional perspective in his later works, to the problem of the external world, is that he came to believe, with the British New Realists, that inference was actually, in many cases, the source of error.
265. *RSDP* (177).
266. Alexander (1910, 11).
267. I say 'objective', even though for Stout his presentations are mental, because he puts them on the object side of the subject–object relation.
268. Alexander (1910, 33).
269. Alexander (1910, 34).

270. Alexander (1910, 16).
271. Alexander (1910, 7).
272. *PP* (34; my italics).
273. *NSD* (185; my italics).
274. *RSDP* (148–49).
275. *Sensibilia* are 'those objects which have the same metaphysical and physical status as sense-data, without necessarily being data to any mind' (*RSDP*, 148).
276. *RSDP* (146).
277. *RSDP* (146).
278. In *CPBR*6.
279. *OM* (86).
280. *OM* (89).
281. *OM*, (93).
282. *OM* (86).
283. *OM* (94; my italics).
284. *OM* (95).
285. This response to Dawes Hicks' review of *PP* is called 'The Nature of Sense-Data'. I will refer to it as *NSD* hereafter.

5 The Methods of Construction

286. See for example how David Pears relates Hume to Russell in his (1967).
287. The first six chapters of this work were published in the *Monist*.
288. These are collected under the heading of 'Nine Short Manuscripts on Matter [1912–1913]' in *CPBR*, vol. 6. I will reference them according to their title number, as organized in vol. 6, and page number. These title numbers range from 11a to 11h, both inclusive.
289. As already noted, *OKEW*1 or OKEW2, depending on the edition used. *OKEW*2 actually is a revised edition, one which excludes some things of the first edition, and also includes other aspects, such as Russell's inclusions of how in places the theory of relativity would fit into his constructional schemes.
290. Russell says, for example, that the solution of a six-dimensional space is offered so that 'throughout the world, everywhere, there will be an enormous number of particulars co-existing in the same place' (*UCM*, 138).
291. *RSDP* (153).
292. *RSDP* (153).
293. *RSDP* (153).
294. *RSDP* (153).
295. *OKEW*2 (94).
296. *OKEW*2 (92).
297. 11b (100).
298. This is what Russell explicitly says in one of his short notes on the matter: 'but the ultimate analysis must be something which leads to *two* places, *here* and *there*, as involved in the visual datum. This makes it possible for two colours to be in the same place at the same time *from different places*, and so avoids one of the chief difficulties that beset naïve realism' (11a, 98).

299. Reproduced by courtesy of the University Librarian and Director, the John Rylands University Library, The University of Manchester. Reference: Alex/A/1/1/212/6 (my italics). The mention of the meeting at Durham is a reference to a symposium which was published in the *PAS* of 1913–1914 as 'The Status of Sense-Data'. Both Moore and Stout presented their positions in lengthy articles, which were then discussed by many who participated, including Nunn and Alexander. As a matter of fact, Nunn, later (in his 1916), wrote a reply to both these papers by Moore and Stout. One of the important aspects of this meeting was that in the discussion that ensued afterwards, many who were present were introduced for the first time to Russell's views with regard to his logical constructions. Russell was not present. It was Moore who presented Russell's method of logical construction.
300. *UCM* (125).
301. *UCM* (143).
302. *UCM* (138).
303. *RSDP* (162).
304. *OKEW*2 (94).
305. *OKEW*2 (92).
306. Nunn (1910, 206).
307. *UCM* (138).
308. *RSDP* (161).
309. Stout might be an exception to this. I will suggest later that this might have been linked to certain issues and concerns he shared with Russell.
310. Alex/A/1/1/212/7 of 28 July 1914. Reproduced by courtesy of the University Librarian and Director, the John Rylands University Library, The University of Manchester.
311. *OKEW*2 (95).
312. *OKEW*2 (95).
313. *UCM* (140).
314. *UCM* (140).
315. *UCM* (140).
316. *OKEW*2 (96).
317. *OKEW*2 (97, 98).
318. *RSDP* (160).
319. *OKEW*2 (96–7; my italics).
320. *OKEW*2 (96; my italics).
321. Cf. *UCM* (139); *RSDP* (162).
322. *RSDP* (161).
323. *OKEW*2 98).
324. *OKEW*2 (99; sic.).
325. Marx W. Wartofsky rightly observes that 'Russell … talks of a *space of perspectives*, in a frankly geometrical construction, which relies very little on sense-data as appearances, but relies rather on the laws of geometrical optics and of perspective transformations' (Wartofsky 1979, 176). I think he is right to stress the connection here to geometrical construction, but wrong in claiming it relies very little on sense-data as appearances. This mistaken claim arises, I believe, in the commonly neglected stress that Russell placed on the object-like nature of sense-data (as physical or

existents in their own right). What is even more interesting, however, is that if we place Russell's work in the theory of perception, partly detailed here in the present chapter, into the light of Wartofsky's main thesis, that representations (of which sense-data are an infamous instance) are historically linked to praxis, Russell's problems are really only addressing their link to the theory of geometric optics of the seventeenth century. 'Once we are required to *represent shape*, we are already caught up in the web of canons of representation – and in particular, in the modern world, we are bound to a canonical framework derived from geometrical optics … The same geometrical optics that gives us the ellipse as a retinal image of the tilted circle gives us the laws of perspective which direct us to represent the tilted circle as an ellipse' (Wartofsky 1979, 185).

326. *OKEW*2 (100).
327. 11b (99).
328. 11a (98).
329. 11b (100).
330. This harkens back to Russell's original understanding of 'qualities' in *PP* where he says, 'But we cannot hope to be acquainted directly with the quality in the physical object which makes it look blue or red. Science tells us that this quality is a certain sort of wave-motion, and this sounds familiar because we think of wave-motions in the space we see. But the wave-motions must really be in physical space, with which we have no direct acquaintance; thus the real wave-motions have not that familiarity which we might have supposed them to have' (*PP*, 34).
331. *RSDP* (146).
332. *OKEW*2 (100).
333. *RSDP* (163).
334. *OKEW*2 (104).
335. *OKEW*2 (72).
336. *OKEW*2 (106).
337. Cf. *OKEW*2 (106–9).
338. *RSDP* (146–47).
339. Stout (1905, 150).
340. Stout (1905, 150).
341. Stout (1905, 150).
342. *OKEW*2 (72).
343. Says Stout, 'Our problem is to reconcile these two views. And there seems only one course to follow. We must inquire into the nature of the connexion between sensation and thing, on account of which the sensation is called the sensible appearance of the thing – the appearance of the thing to the senses' (Stout 1905, 153).
344. Russell says, for example, 'Physics started from the common-sense belief in fairly permanent and fairly rigid bodies … This common-sense belief, it should be noticed, is a piece of audacious metaphysical theorizing' (*OKEW*2, 107).
345. *SMP* (98).
346. *OKEW*2 (75).
347. This is not to say that they did not consider these issues, but only to say that they gave more space and consideration in their writings to the nature

of sensible appearances. Nunn, however, more so than Alexander. This is especially true for Nunn's 1910 response to Stout. But earlier material, like his 1906 and 1907, as we saw, are directly involved with the nature of construction.

348. See Chapter 1, Section 1.7.
349. This is the heading of Lecture II of *OKEW*.
350. *OKEW*2 (42).
351. Cf. Fritz (1952).
352. *OKEW*2 (76).
353. *OKEW*2 (78).
354. *OKEW*2 (78, 79).
355. *PD* (136).
356. *OKEW*2 (80).
357. Stout (1905, 158).
358. An example Stout explicitly uses to illustrate just this point about the role of ideal constructions in his *Manual* (Stout 1899, 491).
359. Stout (1905, 160).
360. Logic, because for Stout it requires the subject–object distinction which comes only after knowledge becomes possible: Cf. Stout (1905, 159).
361. As he says there, the 'transition [from what is immediately experienced to what is not] could not be effected through retentiveness or association. For, in order to be retained, knowledge must first be gained; hence if we are primarily confined to knowledge of our own sense-experiences, these may indeed come to mean for us other persisting and changing independently of the coming and going of sense-perception from which the cognition of an external world can develop consists not merely in a sensuous presentation, but in a sensuous presentation apprehended as conditioned by something other than itself' (Stout 1913, 432).
362. Stout (1905, 160).
363. Further discussed below in Chapter 6.
364. Stout (1905, 161).
365. *PD* (137).
366. Stout (1913, 431).
367. Stout (1913, 431).
368. Stout (1913, 430).
369. For example, he says things like: 'People who have never read any psychology seldom realize how much mental labour has gone into the construction of the one all-embracing space into which all sensible objects are supposed to fit. Kant, who was unusually ignorant of psychology, described space as "an infinite given whole", whereas a moment's psychological reflection shows that a space which is infinite is not given, while a space which can be called given is not infinite' (*OKEW*2, 118).
370. *PD* (37).
371. Fritz (1952, 99).
372. Fritz (1952, 99).
373. Fritz, however, is right to ask about the relationship, as a consequence, between what is psychologically primitive and epistemological certainty. And here I am with Fritz in thinking that Russell's 'lack of clarity in this respect is … unfortunate' (Fritz 1952, 99).

6 The Method of Logical Construction

374. *OKEW*2 (130–31).
375. My main source for this discussion is the classic paper by E. Nagel entitled, 'The Formation of Modern Conceptions of Formal Logic in the Development of Geometry', *Osiris*, vol. 7, 1939, pp. 142–223. The outline given of a mathematical development is, I believe, quite generally accepted. But also see (Schubring 2005).
376. Quoted in Nagel (1935, 432).
377. Nagel (1935, 432).
378. Quoted in Nagel (1935, 438).
379. Quoted in Nagel (1939, 153).
380. Quoted in Nagel (1939, 151–52).
381. Nagel (1939, 154).
382. Nagel reminds us, however, that Poncelet was really still much too linked to the old conception of geometry to be consciously clear about such a point, especially as it is expressed here. Cf. Nagel (1939, 154).
383. Quoted in Nagel (1939, 154–55).
384. Nagel 1939, 155).
385. Quoted in Nagel (1939, 160).
386. Nagel (1939, 161).
387. Quoted in Nagel (1939, 161); 'Historically', says Nagel, 'imaginary numbers were introduced into algebra via the method of postulation, and were looked upon with suspicion because there were no good reasons advanced that there were such things' (Nagel 1939, 162).
388. Nagel (1939, 165–68).
389. Nagel (1939, 167).
390. These two instances of constructions have been seen to be in some sense analogous. This fact, for example, does not escape Coolidge who says that these 'definitions of von Staudt are certainly revolutionary. It was a bold step to define as an imaginary point something that is made up of an infinite number of real points. Von Staudt could not foresee the analogy to Dedekind's definition of an irrational as a split in the real number system' (Coolidge 1934, 224).
391. Says Coolidge: 'Von Staudt was acutely conscious that the treatment of imaginary elements in pure geometry was extremely unsatisfactory. Poncelet's system of ideal chords and supplementaries was the only contribution to the subject that had any real substance. He set to work to remedy this defect in truly heroic fashion' (Coolidge 1934, 223).
392. Quoted in Nagel (1939, 175).
393. Nagel (1939, 175).
394. Quoted in Coolidge (1963, 100); Coolidge (1934, 223–24).
395. Nagel (1939, 177).
396. Except of course the part which mentions 'the original domain of real points with the desired geometrical properties'. This would instead have to mention the domain of the given and the desired properties required by physics.
397. Dedekind (1959, 37).
398. Dedekind (1959, 36).

399. Dedekind (1959, 36).
400. Dedekind (1959, 37).
401. Dedekind (1959, 38).
402. Dedekind (1959, 38).
403. Dedekind (1959, 40).
404. *PoM* (280).
405. *PoM* (280).
406. Describing Dedekind's theory, Russell explains that 'Continuity *seems* to demand that some term should correspond to this section. A number which lies between the two classes must be a new number, since all the old numbers are classified. This new number, which is thus defined by its position in a series, is an *irrational* number' (*PoM*, 279). I only note this similarity between Poncelet's and Dedekind's principles here to later refer to this observation with regard to Russell's solution to the problem of the external world proposed in *PP*, which also seems to rely on a principle of continuity.
407. *PoM* (280).
408. *PoM* (280).
409. *PoM* (277).
410. *PoM* (281; my italics).
411. *PoM* (282).
412. *PoM* (282).
413. *PoM* (282).
414. *PoM* (283).
415. 'A segment of rationals may be defined as a class of rationals which is not null, nor yet coextensive with the rationals themselves (i.e., which contains some but not all rationals), and which is identical with the class of rationals less than a (variable) term of itself, i.e. with the class of rationals x such that there is a rational y of the said class such that x is less than y' (*PoM*, 271).
416. *PoM* (285–86).
417. *PoM* (286).
418. *PoM* (xix).
419. *PoM* (xix).
420. Cf. *OM* (85–6).
421. *OM* (84, 85).
422. It is interesting that here he explicitly discusses the idea of hypothesis and hypothetical entities. But he does so in light of possible inferences made on the basis of some principle to physical things.
423. *PoM* (278).
424. I am of course referring to Whitehead's brilliant 1906 paper 'On Mathematical Concepts of the Material World'.
425. Whitehead (1906, 465).
426. Whitehead (1906, 467).
427. I can only point this out here. A fuller study of this issue would have to take us far into a detailed comparison between the various ways Whitehead and Moore might have helped to shape the ideas of Russell with regard to the problem of the external world, and then to compare this with the way similar issues were shaped and construed in the Controversy. This I will not attempt to do here.

428. Quoted in Vuillemin (1972, 305; my italics). Peano's original statement can be found translated in Kennedy (1974).
429. 'Now this definition', says Russell, 'by abstraction, and generally the process employed in such definitions, suffers from an absolutely fatal formal defect: it does not show that only one object satisfies the definition. Thus instead of obtaining *one* common property of similar classes, which is *the* number of the classes in question, we obtain a *class* of such properties, with no means of deciding how many terms this class contains' (*PoM*, 114).
430. *PoM* (220).
431. Russell says that a 'common property of two terms is any third term to which both have one and the same relation' (*PoM*, 166).
432. *PoM* (166–67).
433. *OKEW*2 (51).
434. Cf. *PoM* (111–16). Says Russell (*PoM*, 305): 'by means of the principle of abstraction, we can give, as we saw in Part II, a formal definition of cardinal numbers.'
435. *PoM* (249).
436. Vuillemin (1972, 308).
437. Vuillemin (1972, 310).
438. *OKEW*2 (51).
439. *OKEW*2 (134).
440. Rodriguez-Consuegra (1991, 193).
441. Hager (1994, 70).
442. *MPD* (66).
443. A lengthy discussion is given in Hager (1994) of the importance and role of relations in Russell's thought.
444. Russell for example says in *Logical Atomism* 'that from certain ideas and axioms of formal logic, by the help of the logic of relations, all pure mathematics may be deduced, without any new undefined idea or unproved propositions' (*LA*, 163).
445. Griffin calls this 'relational realism' (Griffin 1991, 326).
446. For an excellent treatment of this issue see (Griffin 1991).
447. *PoM* (221).
448. *PoM* (221).
449. Cf. Stout (1911, 373). Recall the lengthy statement of this view quoted at the end of Chapter 1, Section 1.7. It is probably for such a reason that Stout regarded his doctrine as 'Leibnizian'.
450. Cf. *PoM* (222–25).
451. *PoM* (226).
452. *PoM* (112); Russell also mentions this point in 1901 (*MM*, 79).
453. *PP* (103).
454. *PP* (101–3); *OKEW*2 (79).
455. *PP* (100).
456. *PP* (98).
457. *PP* (85–90).
458. What is intriguing is that Russell actually credits Kant 'for having first called attention to the logical importance of asymmetrical relations' (*PoM*, 227). But without the metaphysics that backs Russell's view of relations, this is pretty useless in the hands of Kant.

459. It may be thought that Moore seems to avoid the problems that Stout thinks Mill and Kant face. He avoids it by actually making what he calls 'concepts' or 'logical ideas' independent of mind and world. That is, the basic and ultimate 'data' are concepts, and these are not capable of change, for they are eternal and timeless. The important thing to note, however, is that Moore actually says he avoids the divorce between concept and existence by reducing the latter into the former: existence itself is a concept, which can be related to other concepts, to make a proposition. The extremely interesting upshot of this is another type of constituting, or constructing; 'It seems,' says Moore, 'necessary, then, to regard the world as formed of concepts [logical ideas]. These are the only objects of knowledge. *They cannot be regarded fundamentally as abstractions either from things or from ideas; since both alike can, if anything is to be true of them, be composed of nothing but concepts*. A thing becomes intelligible first when it is analysed into its constituent concepts' ('The Nature of Judgment', p. 182; my italics). It seems this is the first sort of general articulation of Russell's logical construction project. It sounds as if these 'concepts' become the basic stuff we can be acquainted with, such as sense-data, universals, logical forms,and so on, in Russell's system. That is, they are independent of mind (ideas) and things, but can yet be related to form propositions about the world. See also Pretia (2008).
460. Take for example what he says in his 1946 (*PU*, 31).
461. As outlined in Section 5.1 above.
462. Hager (1994, 92).
463. *IMP* (44–5).
464. Hager (1994, 92–5).
465. Hager (1994, 92). Modifications, such as the numbering; but more importantly, I include 'sensibilia' in 2(a) and 2(b), while Hager does not. These must be included, I believe, because we are dealing here with not only actual observers but also possible ones.
466. Hager (1994, 93); I will not here go into a detailed discussion with regard to each of the four categories. Anyone interested in such a lengthy discussion may refer to Hager (1994, 91–5).
467. *IMP* (34).
468. Says Russell in response to Dewey, 'Yet I am not the Creator … I shall continue to protest that it was not I who made the world' (*PD*, 154).
469. *IMP* (30; my italics). This same point is earlier and more emphatically put, especially in relation to series, by Russell in *PoM* (242).
470. This point becomes central to Russell's later logical constructions where the idea of a 'structure' becomes emphasized. In these early articulations, however, this notion does not play a central role.
471. This is his reading of Vuillemin (1972).
472. Rodriguez-Consuegra thinks 'there is at least an instance in this manuscript where the principle assumes the character of an ontological simplification, i.e. eliminating entities in the same way as Ockham's razor: when real numbers are referred to as segments (classes) of rationals and they are based on the principle as a foundation' (Rodriguez-Consuegra 1991, 191).
473. *PoM* (116).
474. Rodriguez-Consuegra (1991, 192).

475. Rodriguez-Consuegra (1991, 195).
476. *RSDP* (155).
477. *RSDP* (155).
478. Recall the quotation I began this section with, which mentions the fact I have tried to explain here: 'Psychologists, who have done invaluable work in brining to light the chaotic nature of the crude materials supplied by the unmanipulated sensation, have been ignorant of mathematics and modern logic, and have therefore been content to say that matter, space, and time are 'intellectual constructions', without making any attempt to show in detail either how the intellect can construct them, or what secures the practical validity which physics shows them to possess' (*OKEW*2 130–31).
479. *RSDP* (155).

Conclusion

480. A fascinating and important, but largely neglected book by D.R. Lachterman (1989) deals with the geometric notion of construction in the pre-Kant framework of its history. Especially interesting are the shifts in the notion, particularly with regard to mathematical demonstration, from the Greek and Scholastic views on construction to those of Descartes and the beginnings of Modernity. Also see (Bos 2001).

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