

A CRITICAL EXPOSITION
OF
RUSSELL'S SOLUTION TO THE MIND-BODY PROBLEM

by

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ABSTRACT

Bertrand Russell believed that he had definitely solved the mind-body problem and that general recognition of this fact had not occurred because his theory was not understood. He first proposed his solution in 1919. In 1959 he lamented that a general appreciation of it had not occurred. As Russell was a writer acclaimed for the clarity of his style and thought, this is a bewildering assertion on his part. I therefore undertake to present his solution as intelligibly as possible in order to assess whether or not the mind-body problem has been solved. Since Russell never devoted one particular work to this topic, it becomes necessary to examine a great number of his books containing sections of relevance. Furthermore, as his solution is so embedded in the presuppositions, attitude and methodology of his particular notion of philosophy, this necessitates an examination of those aspects relevant to his thesis.

I argue that Russell did not completely solve the traditional mind-body problem, but that he may have provided the best working hypothesis for scientific

investigation. I argue the distinction between a solution and a working hypothesis, stressing that the latter may eventually evolve into the former. I justify this assertion by indicating problematic areas in Russell's work which may or may not be capable of being remedied. These areas are, in particular, his rejection of the subject, which results in a variety of difficulties with memory, his rejection of substance, and finally his presentation of mental phenomena as non-relational. These problems begin with his initial stance towards philosophy. The basis of the validity of inferences as to structure and the limitations of a structural account of the mind and matter which by Russell's definition cannot present the intrinsic characteristics of matter, are also questioned. I conclude my criticisms with Russell's abandonment of the subject and the resulting reified sense of images.

To the Matter of Russell's Mind

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PREFACE

The question of the relation and status of mind as opposed to matter has been one of the prevailing concerns of philosophers. Descartes (1596-1650), who is generally considered to be the father of modern philosophy, was responsible for the introduction of the Interactionist theory. According to his account, body was a substance predicated as being extended and unthinking, while mind was unextended and thinking. These two very distinct substances, he believed, interacted in the pineal gland, a section of our anatomy whose function to this day remains obscure. This initial dichotomy has persisted ever since, and every philosopher of stature has felt the need to present his own contribution towards a solution.

Leibniz (1646-1716) advocated a theory known as Parallelism. Parallelism views mind and matter as distinct and not subject to interaction, although both appear related because of a pre-established harmony. Malebranche (1638-1715) put forth a variant of this called Occasionalism, holding that although mind and body are distinct and proceed in accordance with a pre-established harmony, it is occasionally necessary for God to intercede so that the two series may be kept parallel. Spinoza (1632-1677) offered yet another theory. He held that mind and body are not distinct but rather one and the same substance viewed from different aspects. Consequently this hypothesis has been christened the Double-Aspect theory.

The double-aspect theory has found considerable favour in the eyes of

many contemporary thinkers. Schopenhauer (1788-1860), who viewed the mind-body problem as the "world knot", argued along lines which had much in common with Spinoza. In The World as Will and Representation, he wrote:

Every true act of will is also at once and inevitably a movement of his body; he cannot actually act without at the same time being aware that it appears as a movement of the body. The act of will and action of the body are not two different states objectively known, connected by a bond of causality; they do not stand in the relation of cause and effect, but are one and the same thing, though given in entirely different ways, first quite directly, and then in perception for the understanding.¹

Whitehead (1861-1947) put forth another variation of the double-aspect theory in the metaphysical work Process and Reality. Whitehead redefined matter as "drop-lets of experience" which form groups comprising "actual occasions". The impetus of his solution resided in the fact that science, at the turn of our century, underwent drastic revisions. On the one hand, psychology began to present mind as much less "mental", while at the same time physics began to present matter as much less "material". Identical considerations were important to Russell's formulation of his own solution to the mind-body problem. It must be noted here that, in the case of Whitehead and Russell, the similarities in their solutions begin and end at this point.

In addition to the theories already mentioned, we may add Reductive Materialism, which holds that mind can be explained totally in physical terms; Pan-Psychism, that body is wholly explicable in terms of mind; Monistic Materialism, that reality consists solely of matter and its determinations; Monistic

¹Vol. I, p. 100.

Idealism, that reality is totally explicable in terms of mind and its determinations; Ontological Dualism, that mind and matter are two distinct substances; Dualistic Interactionism (generally regarded as the common-sense view), that mind and matter are independent but interact and are somehow related; and finally Epiphenomenalism, which holds that mind is some kind of secondary offshoot of matter. We do not pretend to have provided an exhaustive list of the various theories, but merely to demonstrate the amount of concern which has been generated by the problem and the variety of theories which have been offered.

Russell first proposed his solution in 1919. In 1959 he still held to his original solution of the "world knot", and he lamented that a general appreciation of it had not occurred:

I have found . . . that by analysing physics and perception the problem of the relation of mind and matter can be completely solved. It is true that nobody has accepted what seems to me the solution, but I believe and hope that this is only because my theory has not been understood.²

As Russell was a writer acclaimed for the clarity of his style and thought, this assertion leaves one bewildered. The purpose, therefore, of this thesis is to present Russell's solution as intelligibly as possible, and to assess whether or not we may indeed consider the problem as "completely" solved. We shall argue that the mind-body problem cannot be so viewed, and that it persists despite Russell's successive attempts to convince us otherwise.

Russell never devoted one particular work to the topic. Since the solution, as he saw it, was so imbedded in the presuppositions, methodology and theories

²My Philosophical Development, p. 15.

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contained in his work as a whole, it has necessitated drawing out relevant sections from a number of his books. Our thesis ends simply with a denial that the mind-body problem has been solved. We bow, however, to the objection that Russell's theory may be the best working hypothesis available, insisting only that a working hypothesis does not comprise a solution. The hypothesis may serve as a type of road-map showing the way to a correct solution, or plan of action for further investigation, but with respect to philosophical inquiry the problem remains.

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CHAPTER I

ANTHROPOCENTRIC SUBJECTIVITY AND THE DOCTRINE OF COSMIC PIETY

When Bertrand Arthur William Russell was a young boy living at Pembroke Lodge, his grandmother, the wife of the late Lord John Russell, would upon any mention of philosophy or metaphysics utter the following: "What is mind? no matter; what is matter? never mind." Initially he found this remark amusing. After many repetitions, it became a source of definite irritation. His grandmother's disdain for metaphysics in general is summed up in the poem quoted by Russell in the first volume of his Autobiography:

O Science metaphysical
And very very quizzical,
You only make this maze of life the mazier;
For boasting to illuminate
Such riddles dark as Will and Fate
You muddle them to hazier and hazier.

The cause of every action,
You expound with satisfaction;
Through the mind in all its corners and recesses
You say that you have travelled,
And all problems unravelled
And axioms you call your learned guesses.

Right and wrong you've so dissected,
And their fragments so connected,
That which we follow doesn't seem to matter;
But the cobwebs you have wrought,
And the silly flies they have caught,
It needs no broom miraculous to shatter.

You know no more than I,
What is laughter, tear, or sigh,

Or love, or hate, or anger, or compassion;
Metaphysics, then, adieu,
Without you I can do,
And I think you'll very soon be out of fashion. (P. 45.)

It is tempting to suppose that Russell inherited from her, at least two characteristics which would later directly affect his career as a philosopher. The first may be seen in his lifelong dislike for idle speculation. The other, which concerns the present inquiry, was a lifelong interest in the mind-body problem.

The moulding of Russell's attitude towards the study of philosophy probably owes more to his grandmother than anyone has so far suspected. Her poem could easily have come from his pen. It is equally surprising to note the continuity of this outlook throughout his lifetime. His original excursions into the realm of philosophy at the age of 16 appear in the unpublished "Greek Exercises" of 1888-9, so named because they were written in Greek letters to prevent the detection of his heretical religious doubts. The original manuscript is in the Bertrand Russell Archives at McMaster University. A few extracts from it appear in the Autobiography, and we take the liberty of quoting two of them from that source.

19th. I mean today to put down my grounds for belief in God. I may say to begin with that I do believe in God and that I should call myself a theist if I had to give my creed a name. Now in finding reasons for believing in God I shall only take account of scientific arguments. This is a vow I have made which costs me much to keep, and to reject all sentiment. To find then scientific grounds for a belief in God we must go back to the beginning of all things. We know that the present laws of nature have always been in force. The exact quantity of matter and energy now in the universe must have always been in existence, but the nebular hypothesis points to no distant date for the time when the whole universe was filled with undifferentiated nebulous matter. (Vol. I, p. 48.)

Again:

There are two ways of looking at it, first by evolution and comparing men

to animals, second, by comparing men with God. The first is more scientific, for we know all about animals but not about God. Well, I hold that, taking free will first, to consider that there is no clear dividing line between man and the protozoan, therefore if we give free will to men we must give it also the protozoan; this is rather hard to do. Therefore, unless we are willing to give free will to the protozoan we cannot give it to man ... then we and all living things are simply kept together by chemical forces and are nothing more wonderful than a tree, which no one pretends has free will, and even if we had a good enough knowledge of the forces acting on anyone at any time, then we could tell exactly what he will do. (I, p. 49.)

To show the continuity of Russell's outlook we present a few extracts expressing similar sentiments from subsequent writings.

That man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and his beliefs, are but the outcome of accidental collocations of atoms....¹

... all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand.²

In attempting to understand the elements out of which mental phenomena are compounded, it is of the greatest importance to remember that from the protozoa to man there is nowhere a very wide gap either in structure or in behaviour.³

... from a cosmic point of view, life is a very unimportant phenomenon: very few stars have planets; very few planets can support life. Life, even on the earth, belongs to only a very small proportion of matter close to the earth's surface.⁴

¹"A Free Man's Worship" (1903), reprinted in Mysticism and Logic, p. 41.

²Ibid.

³The Analysis of Mind (1921), p. 41.

⁴The Scientific Outlook (1931), p. 126.

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This list of quotations could be greatly expanded. The similarity of attitude found in them marks Russell's thinking throughout the various stages of his life. We find him even at the age of 16 affirming that sentiment should be suspended from philosophical issues; that science provides the soundest evidence on which to base an argument; that there is no drastic division between man and other animals; that a perspective is to be achieved through the contemplation of the universe as a whole; that man is a creature who is controlled by forces much larger and more powerful than his mind; and that those forces are discovered through the sciences of physics and chemistry.

Much of his attitude centers around what he was to later call the doctrine of "cosmic piety". This doctrine asserts that the philosophical approach to the study of man should be predicated upon a perspective derived from the larger setting of the universe as a whole. The world not being seen in terms of man, man is to be viewed as only a small and relatively unimportant part of something much larger than himself.

An understanding of Russell is facilitated by the appreciation of this basic underlying attitude in which his philosophical method was grounded. It is true that attitude and method can be taken independently of one another: there is no necessary logical connection between the two. A close study of Russell's development, however, reveals this attitude as the soil from which his later work drew nourishment. He wished to gain an insight into the inner workings of things which transcended the limitations of subjectivity. The desire to escape from subjectivity may be seen as having two prongs. On the one hand, he wanted to get away from

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the tendency to see the world only in human terms or in accordance with human wishes. This could be called his reaction against anthropocentric subjectivity, or the mirroring of man in the universe:

... people's ideas about the Universe may be based on the "mirror" idea - Man may be annoyed that he does not know the origin of the Universe and the "mirrors" are all the Religions and "isms"....⁵

The other prong consists in the attempt to go beyond the limits of "physical" subjectivity. By "physical" subjectivity Russell meant the separation of the mind from the external world. We shall seek to clarify this later. For the present, our immediate concern is with anthropocentric subjectivity.

Russell's desire to find truth led him to discredit intuition and emotion as criteria for assessing any theory:

... it demands suppression of emotion. When I speak of "suppression" of emotion, I do not mean that a man should not have emotions about the matters he is investigating, but that he should not accept his emotions as evidence of anything other than themselves, and should not allow them to influence the weight he attaches to evidence.⁶

In Human Knowledge: Its Scope and Limits (1948) he drew the distinction between "individual" and "social" knowledge. "Individual" knowledge, he argued, is the basis of all knowledge since the individual is the ultimate constituent of any experience or endeavour. "Social" knowledge has to do with the collective nature of individual contributions. Richness in association and in emotion must be forfeited in part as a result of the translation of the individual experience into collective

⁵Dear Bertrand Russell: A Selection of his Correspondence with the General Public 1950-1968, p. 101.

⁶My Own Philosophy, p. 19.

expression, namely language. Scientific language robs individual meaning almost entirely. Thus:

The community know both more and less than the individual: it knows, in its collective capacity, all the contents of the Encyclopedia and all the contributions to the Proceedings of learned bodies, but it does not know the warmth and intimate things that make up the colour and texture of individual life. (P. 17.)

The attempt to render individual feelings as data for collective knowledge becomes one which is fraught with great difficulties and more appropriate to the arts:

If he is a superb literary artist he may create in sensitive readers a state of mind not wholly unlike his own, but if he tries scientific methods the stream of his experience will be dissipated in a dusty desert.

(Ibid., p. 17.)

The aim of Russell's purely formal philosophy was to cater as much as possible to this social or collective aspect of knowledge. It is not surprising that those who have gone to his formal writings for insights into the nature of personal experience have invariably left dissatisfied.

His deep need for an outlet for personal meaning found its way into the pages of his more popular books. In the technical books, he wrote as a detached observer, attempting as much as possible to remove subjectivity from the area under study and employing the most formal tools at his disposal. In the popular books, he wrote out of a sense of personal urgency and concern for contemporary issues. Considerations such as these have caused some biographers, such as John Lewis in Bertrand Russell: Philosopher and Humanist, to posit the existence of two Russells of quite distinct natures. This view is the upshot of the general lack of knowledge as to how these two aspects of Russell's thinking are integral

to the man as a whole.

Some, such as Kathleen Nott in her recent book entitled Philosophy and Human Nature, have argued against the idea that philosophy should dispense with sentiment when engaged in philosophical inquiry, pleading for a return to more human values. The extent to which philosophy should be an art or a science is a large and difficult issue. Explicitly, Russell's formal philosophy seems to be both dehumanizing and bare of all human value. Implicitly, however, it seems that to Russell its value came from the belief that the quest for truth must consist in the attempt toward self-transcendence. One of the most important human values has been considered to be that of self-transcendence or altruism, which can find its way into both moral and intellectual realms. A truly moral act is generally considered to be one in which self-interest plays a minor role or is incidental to the outcome of a given act. For example, if someone took care of an aged relative with great kindness for a period of years and then subsequent to the relative's demise found that he had been left a fortune of which he had had no knowledge, then it could be said that the benefit of his actions was only incidental to his motives. If, on the other hand, the actions were performed with full knowledge of the legacy that would be his if he found favour in the eyes of the relative, and that all the actions were based upon the desire for this prize, then normally we should say that the altruism in such a case, if it existed at all, would be minimal. Consequently, the former character would be more respected if he should give a sermon from the pulpit, while the latter one would feel to be a likely candidate for local politics.

The pursuit of truth as Russell saw it is analogous. He felt the necessity to pursue truth independently of his own desires and wishes, immediately suspecting any theory which could accord with them. Russell sought truth within the abstract realm removed from emotive concerns. Consequently it could be argued on Russell's behalf that his formal philosophy, while seeming arid and non-human, had as its basis an implicit courage and self-detachment. Russell, in an attack upon pragmatism written in 1910, clearly expresses these sentiments.

But for those who feel that life on this planet would be a prison if it were not for the windows into a greater world beyond; for those to whom a belief in man's omnipotence seems arrogant, who desire rather the stoic freedom that comes of mastery over the passions than the Napoleonic domination that sees the kingdoms of this world at its feet - in a word, to men who do not find Man an adequate object of their worship, the pragmatist's world will seem narrow and petty, robbing life of all that gives it value, and making Man himself smaller by depriving the universe which he contemplates of all its splendour.⁷

According to Russell, much of the work done on the mind-body problem can be seen as suffering from two serious defects. First, there has been a vested emotional interest in the outcome of the work in that many of the thinkers have held to Christian doctrines. The mind-body problem was involved with concepts such as the immortality of the soul, free will and determinism and a host of other theological doctrines. Mind was equated with spirit while matter was something base and inconsequential.

The distinction between mind and matter, which was not sharply drawn by the pre-Socratics, became emphatic in Plato, in whom it was connected with religion. Christianity took over this aspect of Platonism, and made

⁷Philosophical Essays, p. 111.

It the basis of much theological dogma. Soul and body were different substances; the soul was immortal, while the body decayed at death, though at the resurrection we should acquire a new, incorruptible body....⁸

Secondly, the traditional notion of substance as little pieces of matter similar to tiny billiard balls persisting through time, created a serious gulf between thought and matter. How could the qualitative aspects of mind be reduced to the quantitative feature of matter in motion? Scholastic philosophy regarded matter as substance, holding that it occupied space and persisted through time:

The existence of two sorts of substances, material and mental, was accepted by all leading scholastics.... Gradually the distinction of soul and body, which was at first a recondite metaphysical subtlety, became a part of accepted common sense....⁹

Accordingly, space and time were treated as being independent of one another as implicitly assumed in language.

Soul and body, in the scholastic philosophy (which is still that of Rome), are both substances. "Substance" is a notion derived from syntax, and syntax is derived from the more or less unconscious metaphysics of the primitive races who determined the structure of our languages.... The metaphysical conception of substance is only an attempt to give precision to what common sense means by a thing or a person.¹⁰

Russell's entire approach to the problem of the relationship of mind and matter is substantially different to that of many traditional philosophers. Their concerns were grounded in problems revolving around such concepts as the soul,

⁸ Human Knowledge, p. 57.

⁹ Ibid.

¹⁰ Religion and Science, p. 115.

immortality, free will, personal responsibility as well as a host of other related theological issues. Seemingly, these aspects were regarded by Russell as either being nonsense or being incapable of solution. He espoused what is essentially the materialist position, writing in 1928:

Thus both mind and matter are merely convenient ways of organizing events. There can be no reason for supposing that either a piece of mind or a piece of matter is immortal.

... Although metaphysical materialism cannot be considered true, yet emotionally the world is pretty much the same as it would be if the materialists were in the right. I think the opponents of materialism have always been actuated by two main desires: the first to prove that the mind is immortal, and the second to prove that the ultimate power in the universe is mental rather than physical. In both these respects, I think the materialists were in the right.¹¹

Russell's attitude to philosophy denied the importance of the first aspect of vested emotional importance, since he held that sentiment should be suspended from such an inquiry. His notion of a solution to the mind-body problem was not concerned with making Christianity coherent in respect to physics. Religion deals with attitudes giving man an extremely important place in the universe. The doctrine of cosmic piety may be seen to work in a completely opposite direction in this respect. To Russell, the anthropomorphism of religion rendered its interpretations highly suspect, and he turned to science as the best available source for an understanding of the world:

Science is at no moment quite right, but it is seldom quite wrong, and has, as a rule, a better chance of being right than the theories of the

¹¹"What is the Soul?", reprinted in Let the People Think, pp. 113-14.

unscientific. It is, therefore, rational to accept it hypothetically.¹²

Man to him was only a small part of the universe, not its crowning achievement:

I accept without qualification the view that results from astronomy and geology, from which it would appear that there is no evidence of anything mental except in a tiny fragment of space-time, and that the great processes of nebular and stellar evolution proceed according to laws in which the mind plays no part.¹³

Morris Weitz has remarked upon Russell's heavy emphasis on science in respect to philosophical inquiry.

But above all, I think, he considers the grand role of philosophy to be the justification of science. Unlike Hume he does not seek to challenge science in order to transform our knowledge into scepticism; nor does he wish, like Berkeley, to reconstruct science in terms of experience in order to establish some sort of pan-psychism. His challenge to and his reconstruction of science is motivated by his desire to justify science.¹⁴

Kuhn in his The Structure of Scientific Revolutions, Polanyi in Science, Faith and Society and I. T. Ramsey in Models and Mystery, have all argued upon variations of what is essentially the "model" theory of scientific formulations. The notion of the model is further related to Whitehead's "fallacy of misplaced concreteness". The latter notion revolves around the basic tendency of scientists to forget the tentative nature of their working hypotheses and to treat them as if they were unquestionable truths. Joseph Goebbels is reported to have once told

¹²My Philosophical Development, p. 17.

¹³Ibid., p. 16.

¹⁴"The Unity of Russell's Philosophy", in Schilpp, ed., The Philosophy of Bertrand Russell, p. 102.

Hitler that if a lie is repeated more than three times it becomes true. Similarly, the tentative hypothesis is sometimes imbued into the mind of the student to such an extent, that he is no longer able to see data beyond it, only in it. Scientists sometimes bend data as far as possible to fit a certain theory or refuse to acknowledge the possible validity or existence of data which cannot be formulated within a prevailing hypothesis. As Whitehead says:

There is an error; but it is merely the accidental error of mistaking the abstract for the concrete. It is an example of what I have called the "Fallacy of Misplaced Concreteness". ... The error consists in the persuasion that we are capable of producing notions which are adequately defined in respect to the complexity of relationships required for their illustration in the real world.¹⁵

Again:

We cannot produce that final adjustment of well-defined generalities which constitute a complete metaphysics. But we can produce a variety of partial systems of limited generality. The concordance of ideas within any one such system shows the scope and virility of the basic notions of that scheme of thought.¹⁶

Russell, in an essay entitled "Is Science Superstitious?",¹⁷ took up this point of discussion. He argued that criticisms of science and scientists are useful and that imperfections are bound to be discovered in any human endeavour. He ends with the assertion that the scientific method of impartial observation is an ideal which is to be pursued, and that science, while not giving absolute truth,

¹⁵Science and the Modern World, p. 145.

¹⁶Ibid.

¹⁷Reprinted in Let the People Think.

does give us the best information available at any given time. In short, scientific theories may be flawed, but they are still the best thing at our disposal.

In summary, then, Russell's basic attitude towards philosophy remained remarkably constant throughout his life. One of the most salient characteristics of this attitude was his belief that sentiment and emotion should be suspended from philosophical inquiry. Mistrusting religion, which he believed made too much out of man and not enough out of the universe, he turned to science. His subsequent philosophy became a justification of science, which he felt to be the best available source of information. Mistrusting intuition and emotion, he attempted to pursue an ideal of truth which was independent of the human mind.

A few words of criticism are necessary at this point. To begin with, Russell's suspension of emotion may, or may not, be valid in respect to the mind-body problem for two reasons. It may be that the possible motives which accord with a given theory render it highly suspect. This does not, however, of itself, provide an adequate criterion to dismiss it. Secondly, and perhaps more significantly, we ask whether it is indeed possible to suspend emotion, or does the suspension of emotion constitute just another emotional attitude? To take a psychological line of argument, it may be that there exist equally emotionally-based factors at work in the so-called "suspension" of emotion. For example, the attempt to see human emotions in the perspective of the universe as a whole may be viewed as a psychological means of convincing oneself that experienced emotional conflicts are of little importance. This may result in a sense of absurdity concerning one's own feelings. However, the feeling of absurdity is itself an

emotional state. Russell's doctrine of cosmic piety presupposes that, as individuals possessed of limited powers, we are nevertheless capable of conceiving of the universe as a whole in order to compare ourselves to it. The belief that we can do so may be as impious as the attitude which Russell seeks to discredit.

CHAPTER II
PHYSICAL SUBJECTIVITY AND
THE SUPREME MAXIM OF SCIENTIFIC PHILOSOPHIZING

In the previous chapter we emphasized the continuity of Russell's attitude with respect to emotional subjectivity. We shall now further this line of thought by stressing the continuity of his methodology and its relation to physical subjectivity. Whitehead once referred to Russell as a "Platonic dialogue in himself", while C. D. Broad is said to have remarked that he came out with a new system of philosophy every few years. Russell's writings in technical philosophy cover a span of many years and in that time he changed many of his views. The methodology with which he approached the study of problematic issues is, however, surprisingly constant. Here it may be of use to introduce the distinction between a "change" of view and a "modification". It may be more appropriate to speak of the modification of Russell's ideas rather than of their change. A closer study results in the appreciation of a basic and underlying continuity.

Elizabeth Ramsden Eames in Bertrand Russell's Theory of Knowledge (which has the rare distinction of being one of the few volumes on his work of which Russell personally approved), argues that feelings as to his philosophical instability are generated by two sources.

This punctiliousness in giving credit wherever any other person has had a share in the forming of his views is in line with the view of scientific inquiry as a co-operative venture, but in the eyes of Russell's philosophical

critics it has seemed an evidence of fickleness and instability in one who is influenced by each new wind of doctrine.¹

And again:

Russell is always careful to note where his opinions have changed, and where a formerly held opinion is no longer regarded as tenable. He is not only willing to change his mind, but scrupulous about warning his readers against his former errors. Neither of these habits is common amongst philosophical writers, and they have increased the conviction of Russell's philosophical instability. As a matter of fact, most of the changes in Russell's thought have been on relatively less important aspects of his philosophy, and have come about through the rigorous application of a consistent method.²

His theory as to the relationship between mind and matter remains as one of the few exceptions to this flux of modification. Contrary to Morris Weitz, who traces Russell's neutral monism to 1921, the initial statement of his solution appears in a sketchy way in a 1919 article entitled "On Propositions: what they are and how they mean", where he first mentions his adoption of a variant form of neutral monism. Two years later a more fully developed explanation appeared in The Analysis of Mind. Subsequent statements may be regarded as fundamentally only more detailed elaborations upon the same theory which he held until his death in 1970.

Russell's approach to this particular problem, as well as to philosophy in general, was predicated upon certain basic presuppositions. He referred to them in My Philosophical Development (1959) as his six basic prejudices. They may be briefly summarized as follows:

¹Bertrand Russell's Theory of Knowledge, p. 19.

²Ibid.

- I There is a continuity between animal and human minds which does not imply a change of kind through that of a change in degree.
- II The importance of human life within the greater context of the universe as a whole is minimal and the science of physics allows us an insight into this greater world beyond. Consequently, any attempts to humanize the cosmos, are to be viewed as absurd overstatements by silly individuals with exaggerated self-esteem.
- III We acquire knowledge which transcends experience even though we must admit to serious difficulties in justifying how this occurs.
- IV There are no wholly a priori methods of proving the existence of anything although there are probable inferences which can be and must be accepted despite the fact that they cannot be proved by experience.
- V No other theory apart from the "correspondence theory" of truth has any chance of being right outside of the limited application of variations in Logic and Mathematics.
- VI Analysis gives new knowledge without destroying any previously held knowledge. One should start with something vague but indubitable and then proceed to explore the various divisions and distinctions which at first were not evident.

Of these, we have already discussed the second in reference to Russell's philosophical attitude. Taken together, the third, fourth and last "prejudices" form a unit in respect to his concept of analysis. He begins with things that we know, not how we know that we know them. He considered the latter approach a mistake, "because knowing how we know is one small department of knowing what we know. I think it a mistake for another reason: it tends to give to knowing a cosmic importance which it by no means deserves, and thus prepares the philosophical student for the belief that mind has some kind of supremacy over the non-mental universe...."³ He regarded analysis as his "strongest and most

³My Philosophical Development, p. 16.

unshakable prejudice as regards the methods of philosophical investigation".⁴

At times he likens analysis to the blur of a figure coming out of the fog, such that as the figure draws closer more detail comes into focus. At other times, analysis is compared to the use of a magnifying lens:

I find that by a fixity of attention divisions and distinctions appear where none at first was visible, just as through a microscope you can see the bacilli in impure water which without the microscope are not discernible. There are many who decry analysis, but it seems to me evident, as in the case of impure water, that analysis gives new knowledge without destroying any previously existing knowledge. This applies not only to the structure of physical things, but quite as much to concepts....⁵

The formal aspects of his methodology of analysis attempt to trim down complex and confused notions into elements which are manageable. Russell first tries to delete subjective elements as much as possible in order to be left with the raw data which provide information about some phenomena. The next step consists in the formulation of the most simple unifying hypothesis that will cohere the results of his analytical pruning. His attempt is to produce a deductive chain of simple propositions using as few inductive propositions as possible to form, as he says, the logical guarantee for the rest.

The nature of philosophical analysis, as illustrated in our previous lectures, can now be stated in general terms. We start from a body of common knowledge, which constitutes our data. On examination, the data are found to be complex, rather vague, and largely interdependent logically. By analysis we reduce them to propositions which are as nearly as possible simple and precise, and we arrange them in deductive chains, in which a certain number of initial propositions

⁴Ibid., p. 133.

⁵Ibid., p. 16.

form a logical guarantee for all the rest. These initial propositions are premises for the body of knowledge in question. Premises are thus quite different from data - they are simpler, more precise, and less infected with logical redundancy. If the work of analysis has been performed completely, they will be wholly free from logical redundancy, wholly precise, and as simple as is logically compatible with their leading to the given body of knowledge. The discovery of these premises belongs to philosophy....⁶

A classic example of the application of analysis by Russell can be found in The Problems of Philosophy (1912), in the discussion of the everyday notion of seeing a table. He begins:

In daily life, we assume as certain many things which, on a closer scrutiny, are found to be so full of apparent contradictions that only a great amount of thought enables us to know what it is that we really believe. In the search for certainty, it is natural to begin with our present experiences, and in some sense, no doubt, knowledge is to be derived from them. But any statement as to what it is that our immediate experience makes us know is very likely to be wrong.

(P. 1.)

Dismissing the precision of the description of "the table" as being brown, he maintains that the table is not really the "same" colour all over. Closer attention shows that there are a variety of colours depending upon how the stain has taken at various points, or upon the light. Consequently:

When, in ordinary life, we speak of the colour of the table, we only mean the sort of colour which it will seem to have to a normal spectator from an ordinary point of view under usual conditions of light. But the other colours which appear under other conditions have just as good a right to be considered real....

(Ibid., pp. 9-10.)

What is true of colour becomes equally true in respect to texture. What appears to be smooth is shown by a magnifying lens to consist of small bumps and

⁶Our Knowledge of the External World, p. 214.

irregularities. This picture can be further modified through the use of an even more powerful lens. Even the regularities of previous pictures show themselves as consisting of other blemishes. As a result: "If, then, we cannot trust what we see with the naked eye, why should we trust what we see through a microscope? Thus, again, the confidence in our senses with which we began deserts us."⁷ The real shape, we are told, is inferred from a variety of appearances, or perspectives, with which the viewer is presented. What is called the "real" shape of the table is something with which the percipient is never acquainted directly. It is something inferred from the variety of appearances of various shapes with which he is confronted. The inferred shape is so embedded in common sense that the process of its construction from the variety of particular impressions becomes an almost unconscious process. We infer one entity to explain a chain of impressions. According to Russell, we never directly experience the entity but infer it as a causal connective for the chain of impressions which we directly experience: "We are all in the habit of judging as to the 'real' shapes of things, and we do this so unreflectingly that we come to think we actually see the real shapes."⁸

The final attack upon common sense comes with the dismissal of the sense of touch as affording any direct knowledge of the table. The resistance that we feel in touching the table depends, to a large measure, upon the amount of pressure exerted and the particular area of the body in question. All of these factors influence our judgement and the solidity of the object is inferred from

⁷ibid., p. 10.

⁸ibid.

our impressions of it:

... the various sensations due to various pressures or various parts of the body cannot be supposed to reveal directly any definite property of the table, but at most to be signs of some property which perhaps causes all the sensations, but is not actually apparent in any one of them.⁹

Russell argues that the entity, "the table", if there is one, is not immediately experienced by us through sight, touch, or hearing. Therefore, "the table" is not as definite an entity as the various impressions which we are said to have of it. We have knowledge of the impressions through direct acquaintance in experience. We have no such knowledge of the table itself except in so far as it is an inference grounded in common sense, unifying the aspects into a coherent biography of what we call "one thing". The existence of the entity "the table", then, is not known with the same certainty as the various aspects. It may or may not exist independently. Consequently, in keeping with Russell's supreme maxim of scientific philosophizing, Occam's Razor: "Whenever possible logical constructions are to be substituted for inferred entities",¹⁰ we must dispense with the entity.

The general thrust of Russell's analysis drives a wedge between what we experience, and what we think we experience. This is done by a close scrutiny of the complicated aspects of any given experience which language, more often than not, obscures. His method attempts a return to the experience which

⁹Ibid., p. 10.

¹⁰"The Relation of Sense-Data to Physics", Mysticism and Logic, p. 155.

linguistic baptisms tend to simplify for the purpose of expediency. Analysis becomes an intense attention, an acknowledgement of the force of linguistic conveniences and the attempted re-formulation of the experience as experienced rather than as assumed in common sense. The inferences which replace the abandoned notions of naive realism are based upon the principle of economy. Employing Occam's razor, the simplest unifying theorem is used to explain the largest number of disparate data. Russell's attempt was to combat subjectivity so as to frame a more coherent and inclusive picture of the workings of physical phenomena:

Some people think that it [relativity] supports Kant's view that space and time are "subjective" and are "forms of intuition". I think such people have been misled by the way in which writers on relativity speak of "the observer". It is natural to suppose that the observer is a human being, or at least a mind; but he is just as likely to be a photographic plate or a clock. That is to say, the odd results as to the difference between one "point of view" in a sense applicable to physical instruments just as much as to people with perceptions. The "subjectivity" concerned in the theory of relativity is a physical subjectivity, which would exist equally if there were no such things as minds or senses in the world.¹¹

Hence, physical subjectivity has to do with the limitations resulting from the observer occupying a particular space-time region.

The combined effort of analysis on the one hand and construction on the other becomes the attempt (a) to go beyond the limitations of embedded habits of thinking in respect to the interpretation of data, and (b) to formulate through inference and construction the structure of the physical world beyond the limitations of physical subjectivity. The ironic aspect of this becomes the fact that "naive realism" is used as the ground for the later rejection of it as an appropriate

¹¹The A. B. C. of Relativity, p. 133.

interpretation. Thus the famous conundrum: "Naive realism leads to physics, and physics, if true, shows that naive realism is false. Therefore, naive realism, if true, is false; therefore it is false."¹² The solution to this problem was viewed by Russell to be in the nature of the interpretations given to the presentations rather than in the presentations themselves. He did not believe that naive realism was mistaken, but that its interpretations were presumptions. They went beyond what was given, being judged true since they had been found adequate for a general description and limited understanding. With the growth of science have come the more exacting needs for the interpretation of physical phenomena. The older criteria of adequacy have become increasingly obsolete as increased demands are made upon the scope of interpretation needed.

This process may be seen to operate in scientific theories when newer theories supplant older ones by virtue of their ability to provide a more inclusive description. With the passing of time, the gulf between the world as we experience it in everyday life and the world as presented through science has grown steadily. Philosophy, argued Russell, if it is to aim at a view of the world which is not based upon the limitations of narrow everyday thinking, must make use of the ideas and methods derived from science. Russell believed that the progress of science was a result of the scientific method which, if applied to philosophy, could bring similar benefits. Therefore, philosophy should proceed from a detailed and piecemeal analysis of common sense. In Our Knowledge of the External World: As a Field

¹²An Inquiry into Meaning and Truth, p. 126.

for the Scientific Method in Philosophy (1914), he announced, "It represents, I believe, the same kind of advance as was introduced into physics by Galileo: the substitution of piecemeal, detailed, and verifiable results for large untested generalities recommended only by a certain appeal to imagination" (p. 14).

What is important in this to the discussion of analysis and methodology is that the faith in common-sense notions of the world and the essentially anthropocentric view of it which has been of some comfort to maintain, have been responsible for a resistance to new scientific ideas. The evolving picture of the universe which has resulted from scientific advances becomes so greatly removed from our normal experience that the language needed and the concepts described appear quite alien. The most recent blow to common sense came with the theory of relativity. Its implications, Russell felt, when realised, would have ramifications for many traditional philosophical problems - in particular, the problem of mind and matter.

In The A. B. C. of Relativity he began by saying that,

What is demanded is a change in our imaginative picture of the world - a picture which has been handed down from remote, perhaps pre-human, ancestors, and has been learned by each of us in early childhood. A change in our imagination is always difficult, especially when we are no longer young. The same sort of change was demanded by Copernicus, when he taught that the earth is not stationary and the heavens do not revolve about it once a day. (P. 9.)

He continued:

In studying the heavens, we are debarred from all sense except sight. We cannot touch the sun, or travel to it; we cannot yet walk round the moon, or apply a foot-rule to the Pleiades. Nevertheless, astronomers have unhesitatingly applied the geometry and physics which they found serviceable on the surface of the earth, and which they had based upon touch and travel It turned out that much of what we learned from the sense of touch was unscientific prejudice, which must be rejected

if we are to have a true picture of the world. (P. 10.)

The impact of the theory of relativity is such as to transform the notions of time and space. Russell believed that this theory demanded the abandonment of the view of substance or matter as something which persists through time. The traditional view of matter had been predicated upon persistence through time. This held as an implicit, if not explicit, assumption that time and space were quite distinct. A piece of matter was said to occupy space while its motion could be measured by taking time as a fixed relation independent of the particular region in question. Since the verification of Einstein's theories, it has been shown that space and time are not ultimately separable; thus the concept of space-time.

The traditional view of matter having been abandoned, any discussion of mind and matter had to take into account what science now revealed about the nature of matter. Matter became, according to Russell, not something hard that you bump into, but rather a construct of "events" which occupy a finite region of space-time.

When we substitute space-time for space and time, we shall naturally expect to derive the physical world from constituents which are limited in time as in space. Such constituents are what we call 'events'. An event does not persist and move, like the traditional piece of matter; it merely exists for its little moment and then ceases. A piece of matter will thus be resolved into a series of events. Just as, in the old view, an extended body was composed of what we may call 'event-particles'. The whole series of these events makes up the whole history of the particle, and the particle is regarded as being its history, not some metaphysical entity to which events happen.¹³

¹³The A. B. C. of Relativity, p. 127.

Russell argued that the entire notion of what Whitehead referred to as the "pushiness" of matter must be banished forever. The permanence of material objects is only apparent as an approximate description. The sense of "pushiness" is derived from the sense of touch which does not give any knowledge as to the intrinsic nature of the object concerned. A material object is not a "thing" which persists through time but a series of events which overlap and form a series.

A wave in the sea persists for a longer or shorter time: the waves that I see dashing themselves to pieces on the Cornish coast may have come all the way from Brazil, but that does not mean that a "thing" has travelled across the Atlantic; it means only that a certain process of change has travelled. And just as a wave in the sea comes to grief at last on the rocks, so an electron or proton may come to grief when it meets some unusual state of affairs.¹⁴

Dr. Johnson's refutation of Berkeley by kicking a stone is viewed as a futile assertion grounded only in naive realism. As Russell says in An Outline of Philosophy:

If he (Dr. Johnson) had known that his foot never touched the stone, and that both were only complicated systems of wave-motions, he might have been less satisfied with his refutation. We cannot say that "matter" is the cause of our sensations. We can say that the events which cause our sensations usually belong to the sort of group that physicists regard as material; but that is a very different thing.... The events which are the real stuff of the world are not impenetrable, since they can overlap in space-time. In a word, "matter" has become no more than a convenient shorthand for stating certain casual laws concerning events. (P. 291.)

Consequently, at least on the face of it, the traditional problems of reducing mind to the activities of little particles of substance, has been supplanted with the problem of reducing mind to a complex biography of overlapping space-time events. Already, much has been done to bridge the gap between the two by

¹⁴Outline of Philosophy, p. 290.

removing the intrinsic property of matter as something which one bumps into. It is altogether too clear that one cannot bump into a thought. As Gottschalk has said:

Einstein revised the earlier crude conception of matter and mass since it no longer stood up to the new ideas in physics and psychology. Mind now lost some of its aura of independence, and matter was no longer thought of as something subordinate and inferior.¹⁵

We shall now summarize the contents of this chapter before presenting the solution. The apparent fickleness of Russell's philosophy is mostly illusory. Just as his attitude towards philosophy remained constant, so it may be said that his methodology underwent very little revision. The modifications in the products of the application by this methodology are seen to be the necessary results of its consistent application. Russell's deep desire to escape from anthropocentric subjectivity led him to engage in a life-long love affair with science since it too aimed at a broad impersonal overview of the universe. Just as there was a drastic rift between the real world and the world as humans felt it to be in accordance with their inflated views of their own cosmic importance, science created an equal division between the world as supposed in common sense and the world as viewed by physics.

Consequently, the combined thrust of the notions of anthropocentric and physical subjectivity became responsible for a heightened sense of alienation between mind and the external world which threatened at each moment to topple

¹⁵Herbert Gottschalk, Bertrand Russell: A Life, p. 65.

Russell's philosophy over into the realm of solipsism. Since mind was so alienated from the external world, the tools whereby a knowledge could be achieved were analysis and construction with the regulating factor of Occam's Razor. For these reasons we have chosen to employ the two distinctions of subjectivity along with Russell's two most basic underlying notions in respect to philosophy - the doctrine of cosmic piety and "the supreme maxim of scientific philosophizing", Occam's Razor.

These first two chapters may be taken as an introduction to the presentation of the theory of the relation of mind and body. We regard their content as necessary to any understanding of Russell's philosophy. Only by appreciating the extent to which conscious experience, according to Russell, was separated from the external world can we understand his insistence upon inference and construction. Furthermore, the necessity for inference justifies the need for abstract explanations since in a sense the "real" world for Russell must be beyond the limitations of subjectivity. In a manner of speaking, then, with Russell's philosophy the abstract is more "real" than our immediate experience. Correspondingly, the normal status of abstract explanations is turned upside down.

This attitude and methodology combined to affect Russell's solution to the mind-body problem in a very direct fashion. To begin with, the spirituality of mind is denied outright by his rejection of religion and his view that mind is not very significant with respect to other occurrences. Just as others have attempted to justify religion through philosophy, Russell justified science in a similar fashion. His desire to observe impartially led him to accept scientific

explanations as the most trustworthy ones. The combined force of quantum mechanics and the theory of relativity, which he believed discredited the notion of substance, allowed him to adopt space-time events as the ultimate constituents of reality. His stance on physical subjectivity minimized any difficulty in rejecting substance since he thought that the permanence, solidity and hardness of matter were not intrinsic qualities of matter, but only the effects of events in the external world upon our central nervous system. Russell's view of matter held that it is not ultimately comprised of atoms but that atoms are chains of space-time events.¹⁶ Since qualities of external events cannot be known, the only qualities that we can know are those within our immediate experience. The only knowledge that we can derive of the external world will be as to structure. An event as a unit has no qualities and although appearing in a noun sense is taken as more like a verb. Qualities appear in consciousness as the result of various structures or organizations of events in space-time and cannot be predicated of an event but of a series or biography of space-time events.

In the next chapter we shall see that Russell, while diminishing problems in one area, serves to perpetuate them in another. Consequently, The Analysis of Mind will be viewed as a fundamental testing-ground for the application of Russell's mind-body solution. The problems which will be uncovered there will constitute the possible objections to the over-all virility of Russell's theory.

¹⁶A discussion of this may be found in Grover Maxwell's "The Later Bertrand Russell: Philosophical Revolutionary", in Bertrand Russell's Philosophy, ed. George Nakhnikian, pp. 169-83, esp. pp. 175-8.

CHAPTER III

NEUTRAL MONISM AND ITS DIFFICULTIES

Russell first introduced a skeletal solution to the mind-body problem in the 1919 article "On Propositions: What they are and how they mean", where he announces his acceptance of a variant form of neutral monism.

William James, in his Essays in Radical Empiricism, developed the view that the mental and the physical are not distinguished by the stuff of which they are made, but only by their causal laws... I think that James is right in making the distinction between causal laws the essential thing. There do seem to be psychological and physical causal laws which are distinct from each other. We may define psychology as the study of one sort of laws, and physics as the study of the other. But when we come to consider the stuff of the two sciences, it would seem that there are particulars which obey only physical laws (namely, unperceived material things), some which obey only psychological laws (namely, images, at least), and some which obey both (namely, sensations). Thus sensations will be both physical and mental, while images will be purely mental. The use of words actually pronounced or written is part of the physical world, but in so far as words obtain their meaning through images, it is impossible to deal adequately with words without introducing psychology and taking account of data obtained by introspection.¹

In many respects this article contains the seeds of The Analysis of Mind (1921). It represents the gradual transformation of Russell's emphasis from propositions as such to their contingent mental environment. Although it was started during his imprisonment at Brixton in 1918 where he also completed the Introduction to Mathematical Philosophy, there was a considerable lapse of time between its start and completion. This indicates that there were some obstacles which he ran into

¹"On Propositions", reprinted in Logic and Knowledge, p. 299.

which caused him to set aside the manuscript for three years (a practice very unusual for Russell) until such time as he thought it ready for publication.

The underlying thesis of The Analysis of Mind is that of neutral monism, albeit in a modified form borrowed from William James. He begins in the preface:

This book has grown out of an attempt to harmonise two different tendencies... On the one hand, many psychologists, especially those of the behaviouralist school tend to adopt what is essentially a materialist position, as a matter of method if not of Metaphysics.... Meanwhile the physicists, especially Einstein and other exponents of the theory of relativity, have been making "matter" less and less material. Their world consists of "events", from which "matter" is derived by logical construction.²

He continues:

The view that seems to me to reconcile the materialist tendency of psychology with the anti-materialist tendency of physics is the view of William James and the American new realists, according to which the "stuff" of the world is neither mental nor material, but a "neutral stuff", out of which both are constructed. I have endeavoured in this work to develop this view in some detail as regards the phenomena with which psychology is concerned.³

What will appear as we proceed into an account of the details of this work is that, to some extent, Russell trades off problems in one direction for problems in another. His first priority seems to be to get rid of the two-story picture of the world as comprised of mind and matter, in which mind occupies a position divided drastically from matter and somehow nearer to the heavens. The obstacle in his path becomes the subject, since the acknowledgement of a subject implies the subject-object dichotomy that he is attempting to circumvent.

So long as the "subject" was retained there was a "mental" entity to which

²The Analysis of Mind, p. 1.

³Ibid.

there was nothing analogous in the material world, but, if sensations are occurrences which are not essentially relational, there is not the same need to regard mental and physical occurrences as fundamentally different. It becomes possible to regard both a mind and a piece of matter as logical constructions formed out of materials not differing vitally and sometimes actually identical. It becomes possible to think that what the physiologist regards as matter in the brain is actually composed of thoughts and feelings, and that the difference between mind and matter is merely one of arrangement. I illustrated this by the analogy of the Post Office Directory, which classifies people in two ways, alphabetical and geographical.⁴

In a sense the dismissal of the "subject" can be seen as fated from the outset. The example of the table given in The Problems of Philosophy is systematically developed in Our Knowledge of the External World and then extended to The Analysis of Mind. Just as the table is reduced from the status of being an entity to a construct of perspectives, mind becomes a composite of events and not an entity which has the special character of being mental. Instead, Russell conceives of the mind as composed of events which are "mental" by virtue of their organisation. The dismissal of the subject produces repercussions in respect to memory, whose role is extended in order to explain the continuity of one mind. Consequently, the application of Russell's solution reduces difficulties in one area while perpetuating them in another - as it has been humorously put, "what he makes on the popcorn, he loses on the peanuts". Before carrying this line of thought further, however, we shall turn to an outline of the more basic arguments of the book. This will aid us in our eventual assessment of Russell's treatment of memory.

Russell begins his analysis by considering Brentano's divisions of cognition

⁴My Philosophical Development, p. 139.

(also taken up by Meinong) into act, content and object. In keeping with theoretical economy, he then proceeds to eliminate what he takes to be unnecessary distinctions. He dismisses the act from outset since: "The occurrence of the content of a thought constitutes the occurrence of the thought. Empirically, I cannot discover anything corresponding to the supposed act; and theoretically I cannot see that it is indispensable" (The Analysis of Mind, pp. 17-18). He then continues: "... the grammatical forms 'I think', 'you think', and 'Mr. Jones thinks', are misleading if regarded as indicating an analysis of a single thought. It would be better to say 'it thinks in me', like 'it rains here', or better still, 'there is a thought in me'" (ibid.). Russell's next act of psychological pruning is to cast out the "object", which, he maintains, is 'a construct more or less out of the content.

Mental events, he argues, are comprised of "sensation", "perception", and "memory". Since none of these are the result of a strict subject-object relationship, their analysis becomes far from simple. Russell asserts that everything consists of events, either physical or mental. These two classes of events are distinguished only by their being subject to different causal laws. The intersection set of the two classes is defined as the realm of "sensations":

Since the mental world and the physical world interact, there would be a boundary between the two: there would be events which would have physical causes and mental effects, while there would be others which would have mental causes and physical effects. Those that have physical causes and mental effects we should define as "sensations". Those that have mental causes and physical effects might perhaps be identified with what we call voluntary movements. (P. 138.)

Perception differs from sensation insofar as it calls into play memory. According to Russell, we infer a pattern of construction upon a two-dimensional manifold

and infer both a third dimension of depth through construction as well as piecing together various percepts as inferred objects. Thus Russell defines a sensation as "the non-mnemic elements in a perception" (p. 139). Here, "mnemic" stands for that which is incorporated as a result of past experience, i. e. the retention of mental events or memory, into the sensation in the present. The word "mnemic" is borrowed from the writings of the German psychologist Richard Semon, whose definition of that term is as follows: "the responses of an organism which so far as hitherto observed facts are concerned, can only be brought under causal laws by including past occurrences in the history of the organism, as part of the causes of the present response" (p. 78).

Semon's views strongly influenced Russell's thought in The Analysis of Mind. It is expedient therefore to briefly sketch and define the terms which Russell borrows from him. Semon maintains that the organism without any immediate stimulus may be referred to as being in a "primary indifference state". The stimulus or excitation produces a change from the primary indifference state to a "secondary indifference state". The "engraphic effect" is the difference between the primary and secondary state which results in an "engram" due to stimulus. This engram constitutes the "mnemic phenomena" which is the incorporation of the "engraphic effect" within the "secondary indifference state". Simultaneous excitements in an organism result in a mutually connected engram-complex, which, insofar as it is subsequently experienced, forms a whole. Semon refers to this as "The First Law of Engrapy".

Following his cue from Semon, Russell defines "sensation" as the

"non-mnemic" elements in a "perception" (p. 139), and accordingly drops the prior notion of "sense-datum" since

If we admit - as I think we should - that the patch of colour may be both physical and psychical, the reason for distinguishing the sense-datum from the sensation disappears, and we may say that the patch of colour and our sensation in seeing it are identical. (P. 143.)

The mnemic colouring of sensation, according to this theory, is very considerable. It is responsible for constituting the "unity of one experience" (p. 129) and transforming "mere occurrences into experiences" as well as transforming "a biography (in our technical sense) into life" (p. 129). It is this which gives the continuity of a person or mind.

"Believing", Russell argues, seems to be the most mental thing we do and that which is most remote from what is done by mere matter: "The whole intellectual life consists of beliefs, and of the passage from one belief to another by what is called 'reasoning'. Beliefs give knowledge and error; they are the vehicles of truth and falsehood" (p. 231). Russell maintains that the truth or falsity of a belief does not depend upon anything intrinsic within the belief, but rather, upon the nature of its relation to what he calls its "objective".

The particular fact that makes a given belief true or false I call its "objective" and the relation of the belief to its objective I call the "reference" or the "objective reference" of the belief. Thus if I believe that Columbus crossed the Atlantic in 1492, the "objective" of my belief is Columbus's actual voyage, and the "reference" of my belief is the relation between my belief and the voyage - that relation, namely, in virtue of which the voyage makes my belief true (or, in another case, false). "Reference" of beliefs differs from "meaning" of words in various ways, but especially in the fact that it is of two kinds, "true" reference and "false" reference. (P. 232.)

Memory is tied in with the analysis of belief in that Russell defines memory as one of its forms. The complete list reads, "bare assent", "memory" and "expectation", all of which are defined as being different from what is believed. Each has an independent and constant character that is again independent of what is believed.

Memory, according to Russell, constitutes knowledge in one of its forms, and as we have seen is also one of the forms of belief. Memory is, moreover, a pervading phenomena since it is presupposed in one sense or another in all forms of knowledge. Sensation is not considered by Russell to be a form of knowledge. Perception differs from sensation insofar as perception involves the inclusion with sensation of expectations and images of habitual associates. Memory involves the fact of images defined as approximately representing impressions. The difficulty here arises when we seek to explain how it is that we are able to believe that images are usually approximate copies of sensation. This implies a comparison of a present image with a past sensation. We cannot, according to Russell, bring the past and present into the same experience. A memory-belief must therefore be something happening in the present. These occurrences which are called knowledge of the past become logically independent of the past and wholly analyzable into present contents. Russell must then seek some "present" criteria whereby we are able to distinguish the accuracy of a memory-image. To do this he introduces the notion of familiarity, a feeling which is supposed to accompany a memory-image and which is capable of degrees. Another criterion introduced is that of a feeling of "pastness" which is related to context:

We may say, then, that images are regarded by us as more or less

accurate copies of past occurrences because they come to us with two sorts of feeling: (1) Those that may be called feelings of familiarity; (2) those that may be collected together as feelings giving a sense of pastness. The first lead us to trust our memories, the second to assign places to them in time-order. (P. 163.)

Since Russell earlier in the work abandoned the notion of the subject, his treatment of memory encounters difficulty in explaining the apparent "act" of remembering which seems to necessitate the introduction of an acting "subject". In his attempt to circumvent these issues he cites three "indubitable data" concerning the past: (1) in any given instance our memory may be at fault; (2) we are definitely able to know more about the past than the future; (3) the truth of a memory cannot be wholly explained by a pragmatic definition since our minds are full of trivial recollections and do not have any visible importance for the future. Following the example of Bergson, he then distinguishes two forms of memory, those of habit and those of independent recollection. The latter he feels embodies knowledge, whereas the former does not. Before going on to define "true" memory, Russell brings out the feelings of familiarity and recognition. Familiarity is defined as being a definite feeling which is capable of existing without an object but which normally has some specific relation to a feature of the environment. That relation is expressed when we say that the feature is familiar. Recognition occurs in two different ways. The first is when we not only feel that a thing is familiar but know that it is such and such. As an example of this he cites the situation in which one recognises a "cat". We know that a certain object is a cat by virtue of having seen other cats before but here the recognition does not rely upon any particular occasion when we have seen a cat. This type of recognition is labeled as a habit of association. The sense of

recognition which does involve knowledge consists not merely of knowing the name of a thing or a property of it, but knowing that we have seen the object before.

This knowledge is memory in one sense, though in another it is not. It does not involve a definite past event, but only the knowledge that something happening now is similar to something that happened before. It differs from the sense of familiarity by being cognitive, it is a belief or judgement, which the sense of familiarity is not. (P. 170.)

I merely wish to emphasize the fact that recognition, in our second sense, consists in a belief, which we may express approximately in the words "This has existed before." (P. 180.)

We do not, strictly speaking, ever experience the same thing twice, Russell maintains. This would be to entify or make objects out of logical constructions. "This", then, must be interpreted somewhat loosely so as to include "anything sufficiently like what we are seeing at the moment (p. 171). Recognition, moreover, does not have as its basis the repetition of a reaction to stimulus as is maintained by the behaviouralists, but rather in the difference between repeated stimuli and a new one. Recognition demands the realisation of at least two similar occasions and cannot exist without the one or the other. "Thus the phenomena of recognition has as its cause the two occasions when the stimulus has occurred; either alone is insufficient" (p. 172).

True memory as opposed to habit memory consists of knowledge of past events, although knowledge of some past events is not a sufficient condition for a true memory. The difference between the two consists in the accompanying feeling toward them. Memory, he goes on to say, resembles the knowledge derived from the senses, "It is immediate, not inferred, not abstract; it differs from perception mainly by being referred to the past" (p. 173).

Russell then distinguishes two basic questions in the analysis of memory.

The first is the nature of the present occurrence when we remember, which, he says, directly concerns the psychologist. The second concerns the relation between the present occurrence in memory to the past event remembered, which, he says, is the territory of the theory of knowledge. In this description of the first phenomenon we see the introduction of the notion of the "specious present", which he defines as follows:

A sensation fades gradually, passing by continuous gradations to the status of an image. This retention of the immediate past in a condition intermediate between sensation and image may be called "immediate memory". Everything belonging to it is included with sensation in what is called the "specious present". The specious present includes elements at all stages on the journey from sensation to image. (P. 174.)

The process consists of a sensation which passes away or fades and in fading is referred to as an "akoluthic" sensation. It then passes on to the status of an image after this "akoluthic" process has terminated. True memory applies to the calling up of images. This calling up can only occur when the sensation has faded and left behind in its place an image. Immediate memory refers to the process of retaining sensations prior to this transformation into an image. "Immediate memory is important both because it provides experience of succession, and because it bridges the gulf between sensations and the images of which they are the copies" (p. 175). True memory is defined as the fresh calling up of images which have not been called up before in the same way.

There is no intrinsic difference between a memory-image and an imagination-image apart from the fact that with a memory-image we feel an accompanying assertion to the effect "this happened". In other words, a memory-image is

accompanied by a belief and a belief can be categorised as one of three forms, namely, (a) memory, (b) expectation, and (c) bare assent. The pastness, therefore, of a memory lies not in the content of the image itself, but within the nature of its belief-feeling. The use of words in the description of an image is derived from habit. That habit consists of "associating them with something having a fixed time relation to our present" (p. 177). We are driven from the present to memory of the past by virtue of some contextual change or contrast which ushers in the image of a past memory. "Some present feature of the environment is associated through past experiences, with something now absent; this absent something comes before us as an image, and is contrasted with present sensation" (p. 178). The memory-belief which accompanies a memory-image is that which confers meaning upon it through its giving to us the feeling that it refers to an experienced event. This feeling, Russell says, loosely paraphrased, is, "Something like this happened before".

The use of language here, he warns us, may be deceptive if we allow more accuracy to the terms than is intended in common usage:

Ordinary speech does not distinguish between identity and close similarity. A word applies, not only to one particular, but to a group of particulars, which are not recognised as multiple in common thought or speech. Thus primitive memory, when it judges that "this occurred", is vague, but not false. (P. 180.)

Again:

Precision and vagueness in thought, as in perception, depend upon the degree of difference between responses to more or less similar stimuli. (P. 181.)

Precision and vagueness are changed through practice, which can enable thought

as well as perception to become more precise. A memory is also capable of being defined as vague or precise.

A memory is "vague" when it is appropriate to many different occurrences: for example, "I met a man" is vague, since any man would verify it. A memory is "precise" when the occurrences that would verify it are narrowly circumscribed: for instance, "I met Jones" is precise as compared to "I met a man". A memory is "accurate" when it is both precise and true, i.e. in the above instance, if it was Jones I met. It is precise even if false, provided some definite occurrence would have been required to make it true. (P. 182.)

Just as there are "vague" or "precise" memories, there are words to which Russell refers to as "vague" and "general" words. "This" is an example of a vague word, since it is applicable both to a present memory-image or a past occurrence to which it is supposed to refer. A word is "general" on the other hand, when it is applicable to a number of different objects in virtue of a common property. "We may compare a vague word to a jelly and a general word to a heap of shot. Vague words precede judgements of identity and difference; both general words and particular words are subsequent to such judgements" (p. 184).

The last two questions with which Russell deals relate to what we mean by "occurred" in the proposition "this occurred". First, what causes us to say that a thing occurs? Secondly, what are we feeling when we say this? He defines things that occurred or real things, by virtue of the fact that real things cause sensations, or may be said to fit into a series of correlations such as those that constitute physical objects. The feeling of reality is akin to a feeling of "respect".

It belongs primarily to whatever can do things to us without our voluntary co-operation. This feeling of reality, related to the memory-image, and referred to the past by the specific kind of belief-feeling that is characteristic of memory, seems to be what constitutes the act of remembering in its pure form. (P. 186.)

Russell concludes his chapter on memory by saying, "This analysis of memory is probably extremely faulty, but I do not know how to improve it" (p. 187). In saying this, he clearly demonstrates his own feelings of reserve as to the adequacy of the account given. Furthermore, the final clause to the effect that he cannot suggest how to ameliorate this situation also suggests that Russell himself had come up against a variety of dead ends. It is also apparent that despite his difficulties he still believed that the central thrust of the book was in the right direction.

A few words of critical comment are now in order. It seems at first sight that there is a fundamental discrepancy within Russell's methodology in that his guiding thesis of neutral monism is framed to resolve difficulties and because of this he seems to feel that the holding of such a hypothesis is validated by the removal of the mind-body problem. However, his rejection of the "subject" results in the perpetuation of difficulties, especially in respect to personal identity or the continuity of experience. As a result, the weakest chapter of the book is that which deals with a substitute explanation for the binding of experience into one biography, namely memory. This is a sacrifice which Russell seems quite willing to undergo.

D. F. Pears, in his article "Russell's Theories of Memory 1912-1921", divides Russell's work on memory into two divisions - before and after the abandoning of the subject in 1919. According to Pears, images serve two functions in Russell's later account of memory. They are representative data on one hand and are also "the elements out of which memory propositions are

formed".⁵ Pears goes on to introduce the notion of two directions of "fit", employing Wittgenstein's example of the image of an unknown face.

First, there is the case described by Wittgenstein: "But it is also possible for a face to come before my mind, and then for me to be able to draw it, without my remembering whose it is or when I have seen it." Here the image would be a datum, and, if it struck me as familiar, it would pose the question, "Who is this?", and I would then try to fit a name to an image. But this direction of fit would be reversed if I started with the question, "What does Mr. A look like?" In this case my image would not lead to a question: rather, it would come as the answer to a question already asked. The direction of fit, therefore, would be reversed.⁶

Although Russell employs both directions of fit, he places, argues Pears, a great deal of stress on only one of them: "But images are the gold, and words are only paper currency, because we understand the meanings of words only if we are able to get the right images."⁷ This, he believes, is because Russell analyzes memory as a general phenomenon in respect to both animals and human beings beginning with a theoretical plan grounded in animal behaviour and then proceeding afterwards to present a theory about specifically human mental phenomena. This is in keeping with his prejudice as cited in Chapter Two as to the uniformity of life and the denial of the special status for the homo sapiens brain. Russell also believes that images constitute paradigmatic memories while words express habit-memories.

⁵"Russell's Theories of Memory 1912-1921", in Bertrand Russell's Philosophy, ed. George Nakhtnikian, p. 126.

⁶Ibid.

⁷Ibid., pp. 126-7.

We believe that Russell's stress upon images is due to his rejection of the subject and his attempt to reduce mental occurrences to a non-relational status. This results in an explanation in terms of nouns with adjectival qualifiers. Thus a memory, which previously was a present recollection of a past event, becomes an image which is referred to the past by the qualifying feeling of familiarity but is non-relational in its actual occurrence. Its pastness is inferred from its feeling of familiarity. Pears questions the adequacy of Russell's account of familiarity as a reference to the past:

... the feeling of familiarity, by itself, can neither suggest nor lead me to believe a proposition referring to a definite past experience of mine. One way of getting such a proposition is to take a situation in which the direction of fit is reversed, because for example, I am asked about the shape of my window in my childhood bedroom. But in that case I would not say that my image felt familiar, still less that it struck me as familiar. Rather, it would feel right. So Russell should not have imported the definite past reference described by Wittgenstein, and in the other case, which exhibits the reverse direction of fit, he should not have appealed to the feeling of familiarity. If my answer to a question feels familiar, that may only be because it is my usual error.⁸

He goes on to say that the feeling of familiarity is not always the same feeling just as a face may seem strange either because it is unlike anyone else or if it is someone that we know who looks unlike himself.

Russell's account is open to many other objections. Semon's picture of mental operations which Russell adopts lays a great deal of stress on stimuli external to the organism. Consequently, an organism is said to be in an indifference state. This kind of explanation does not, however, place enough stress on

⁸Ibid., p. 134.

stimuli derived internally. In the human brain, synapse jumps are going on continually whether the person is asleep or awake. Dreaming can be said to be a state in which response to external stimuli is minimized - introspection and deep thought may also be viewed this way where concentration is taken away from the external world and focused upon our internal operations. As Pears has indicated, the initial model of response is based upon simple organisms and then extended unhesitatingly to man without any guarantee that this is in fact a valid jump. This leads Alan Wood to say, "I do not think that what he says can be refuted. But I have a strong prejudice that, in explaining why Sir Edmund Hillary climbed Mount Everest, it is better to say that he wanted to get to the top rather than that he felt discomfort at the bottom".⁹

Russell also believes that all memories may be broken down into present content and expresses this with his sceptical five-minute hypothesis. The question may be asked with some pertinence - what does Russell mean by "present"? If the mind consists of a vast number of space-time events then it must follow that each of these events occupies its own space-time region according to Russell's own definition. If different centers of the brain consist of various structures of space-time events with particular functions then it becomes possible to consider mind as not existing in only one time but as being comprised of a variety of regions of time. Thus, there is the possibility that the structure of events related to consciousness may be said to occupy a different space-time region to those which are related to

⁹Bertrand Russell: The Passionate Sceptic, p. 106.

memory. In brief, if mind is composed of events and events occupy their own region of space-time, what is meant by a present memory? It would seem that some close examination of the definition and use of the word time should be included here in Russell's account. In an atypical fashion, Russell employs the simple unqualified verbal distinction between present and past.

We may recall that the idea of theoretical economy was to minimize the number of inferred entities necessary for an adequate explanation. In cases such as Russell's account of memory, we are hard pressed to define what exactly an adequate explanation is. It would seem that his account would be more coherent if the subject were reinstated. The question then is as to the possibility of retaining some form of the subject and still maintaining the thesis of neutral monism. There is the suggestion that Russell could have maintained the subject had he been prepared to consider it as an organisation of space-time events and not an entity. In The Ego and the Id, Freud justifies a similar form of division along economic, dynamic and topographical lines.¹⁰ If Russell's line of thinking were pursued, we would have to deny the existence of insurance companies, since after all a company is nothing but a collection of employees. If we are looking for an entity called a company, then it is obviously true that no such simple object exists. There is another way of viewing the situation, however, and that is to consider the insurance company as a certain organisation of particular individuals performing a certain range of functions. If this type of definition were applied to the analysis of memory,

¹⁰See The Ego and the Id, esp. pp. 3-9.

it would effect a simplification without the unnecessary positing of superfluous entities. We could retain the notion of the subject or ego as an organization of events closely allied with consciousness. Consequently, when we employed the word "subject", it would not be referring to an object but to a range of activities. The effects of the introduction of such a hypothesis remain to be seen.

One of the most basic aspects of Russell's solution to the mind-body problem is his view that mental phenomena are non-relational. This means that there is no subject and object relationship, since this would mean that there would exist a pure mental "I" over and above the biography of events. In discarding the subject, however, Russell places more stress on the role of memory which becomes responsible for the continuity of personal identity. Furthermore, Russell's abandonment of the subject places more emphasis upon images. Because there is no subject which calls up images, images take on a more independent status and appear in a reified form with attending qualities of feeling occurring with them. Meaning is given to images in a similar fashion in that the meaning of an image corresponds to its "objective" in the external world - this being a variety of the correspondence theory of truth.

Russell seems to deny completely the contextual sense of meaning in keeping with his rejection of the coherence theory of truth, which he feels places too much emphasis upon mind. One of the reasons that Russell rejects the coherence theory is on the basis of trivial memories which have no apparent immediate pragmatic bearing upon the future. Trivial memories, however, as Freud has indicated, often signify something which is by no means trivial. Even

if we do not hold with Freud that this is always the case, any assessment of "trivial" memories cannot disregard this possibility in an a priori manner. Furthermore, the pragmatic possibilities concerning what are called "trivial" memories may signify something indirectly through their very "triviality". That we may choose to remember something because it indirectly is an alternative for a memory of something else is another possibility which cannot be immediately discarded. I may remember the pattern around a certain tea-cup from which I was drinking because the conversation of those present at the time was so uninteresting. In comparison, the pattern has taken on contextually a heightened sense of interest which has been subsequently lost but which remains as an indicator of the contextual circumstances which made it an object of attention. Thus in retrospect, the triviality of that memory may impress me now because I am no longer in the situation which seemed to make it important. The explanation of the context in which the "trivial memory" arose would in this case be far from trivial.

H.H. Joachim, in the 1920 symposium entitled "The Meaning of 'Meaning'",¹¹ engages himself in a massive attack on Russell's theory of mind, in particular his use of "image" as distinct from the "calling up" of it. Joachim accuses Russell of misusing the loose metaphors of common speech in his analysis of visualizing. He argues that Russell isolates the "visual" picture from the act

¹¹F.C.S. Schiller, B. Russell and H.H. Joachim, "The Meaning of 'Meaning'", Mind, 29 (Oct. 1920), 385-414.

of "calling up", thereby perpetuating popular periphrasing in the realm of philosophy. This division he takes to be dubious from the outset and not in keeping with the more dynamic and contingent sense of what we mean when we say that we visualize something.

Nobody, I should have thought would analyze "visualizing" or "imagining" into "calling up", and into the "visual picture" or "image" which is summoned, and regard either of these abstracta as isolable constituents, as actual constituent parts, of the "visualizing". And nobody, I should have thought, would seriously contend that, when I "visualize", there is in fact occurring "in my mind" or "inside my skin" a "visual picture" - a constituent part of my "visualizing", a something which, in "visualizing", I do in fact "call up" and see. One might as well contend that, when I look at a tree, there is, as a constituent part of my "seeing", a "visual sensation" occurring in my mind or inside my skin: or indeed that, what I really "see", are the twin inverted images, which you may detect on my pupils or which the psychologist may imagine to be imprinted on my retinae.¹²

Russell's initial division therefore, separates two distinct events, that of the image and that of the calling up of the image. The isolated image then becomes an entity which is observable and of which meaning is an observable property.

Under his treatment, the "visual picture" becomes an independent event or "imaginal phenomenon", isolated from the visualising, though still called "visual" and a "picture". And, as thus isolated, it is supposed to be one of those "observable entities", of which (as he declares) "meaning is an observable property".¹³

A visual image "resembles" or "copies" sensations according to Russell, such that if we possess an image of a familiar room then that image "means" the room. As Joachim indicates, this can be construed as a rather eccentric use of the concept of meaning.

¹²"The Meaning of 'Meaning'", p. 406.

¹³Ibid.

We may say so: but do we in fact? If Mr. Russell is accustomed to say of a photograph that it "means" its original, or of a forged bank-note that it "means" what it copies, there is no law to prevent him from indulging in so harmless an eccentricity. But most of us reserve "means" for "signs" or "symbols" with little or no resemblance to what they symbolise. A violet "means" humility, and a fox "means" cunning. But the forgery is a "close imitation" of the genuine note, and the photograph "is Jones" or "is exactly like him".¹⁴

Russell adds to his own theory of meaning by saying that an image's meaning also consists in its ability to effect appropriate actions to associated sensations. The modification proves to achieve nothing for Joachim's assessment.

According to the Article, this "visual image" will "mean" my enemy if, and because, it "copies" him - i.e., resembles what he was when I previously saw him. But, according to the Reply, the image will "mean" my enemy only if, and because, having been "associated" with visual sensations of him, it throws me into a fury, or leads me to run away, or causes whatever action may, from the point of view of my instincts and desires, be "appropriate" to the visual sensations which were (let us not forget) "simultaneously" parts of my mind and parts of his body.¹⁵

Furthermore, it invites a variety of questions such as, would a "visual image" have no meaning at the time that it first occurred? And would an image still possess meaning if it caused no actions whatsoever? We may add to Joachim's questions here by putting forth one of our own. How are we able to ascertain whether or not a given action is appropriate to the meaning of an image? The answer to this is clear in simple cases such as if you tell someone to sit down using a little picture and then pointing a finger at their person. However, such cases are hardly representative of the more complex varieties of phenomena

¹⁴Ibid., p. 409.

¹⁵Ibid.

related to terms which do not possess such clearly defined empirical counterparts. It would seem that in order to know that actions were appropriate to the meaning of an image, one would have to already know what the meaning or significance of those actions were and, as psychoanalysis in common with psychology in general has indicated, the significance of actions is not always clearly defined in reference to the meaning assigned within the mind to any given image. The very word "appropriate" is such that it can be placed in an ad hoc fashion to any set of actions given a hypothetical framework within which it acquires meaning.

Joachim's comments concerning the division of the act of calling up and the image which is called up seem valid. At the same time there appears to be no way out of this dilemma, since, if we abandon these abstracta there seems to be no alternative linguistic description which can be put forth without a repetition of the same error. Any noun sense of the word "image" will tend to reify it and at the same time tend to congeal what may be essentially a dynamic and contingent mental process. Furthermore, when we divide any notion of this "process" into "events" we again run the risk of indiscriminantly sealing off into compartments what may not be capable of isolation without some distortion of meaning through a separation from context. This may be likened to the story of the Panda bears who when in captivity refuse to breed even though their environment may be duplicated artificially in the most convincing manner.

Thus Russell's adoption of neutral monism is far from satisfactory. Certain of the resulting problems may or may not be capable of solution at a later date. As it stands, The Analysis of Mind contains a great many rough edges with

no guarantee that time will serve to smooth them. As long as this is the case, the status of Russell's solution to the mind-body problem must be held in suspension. To accept the solution without reservation would imply the belief that all of the problems in his account of memory are capable of solution in the framework of his neutral monism and his abandonment of the subject. This belief is not adequately justified. It remains to be seen whether subsequent refinements are adequate to justify it as the best available hypothesis as to the mind-body relationship.

CHAPTER IV

LATER DEVELOPMENTS IN RUSSELL'S SOLUTION: SPACE-TIME EVENTS AND SIX-DIMENSIONAL SPACE

Let us summarize some of the salient points presented so far. As a result of relativity and quantum physics Russell views as no longer tenable the traditional notion of substance, or matter, as something which persists through time. In its place he inserts the concept of space-time event. An atom, therefore, is viewed in this theory as a series of space-time events which are the ultimate constituents. He posits the hypothesis that mind and matter can both be said to consist of events which differ only in that they obey different causal laws. The abandonment of the "subject" allows him to replace the notion of a simple mental "I" with a complex of events. He believes that what is normally taken to be the subject is the perceptual object called the person but which upon closer analysis yields a complex biography of events. It is memory which retains events, in particular sensations. Some sensations are held together to form a biography of the given individual by memory. The intersection set between mind and matter is comprised of sensations. A sensation may be grouped with a number of other events by a memory-chain, in which case it will become part of a mind. Alternatively, a sensation may be grouped with causal antecedents such that it will become part of the physical world.

An object exists, so to speak, on two levels. First, there is the object as constructed from various perspectives according to mnemonic phenomena and existing

in psychological space. Secondly, there is a complex of events occurring outside the central nervous system occupying physical space. Each of these spaces has three dimensions - thus Russell's concept of six-dimensional space. The image we see is located in our brain, although if we are not imagining it, its progenitor will also have a location and existence outside of mind in its own space-time region. The image which we see refers to something else. When we say that we see a star in the present, we are actually seeing the star as it was several years ago, because the light takes that time to travel to the retina of the eye. Therefore, the star itself has a different space-time location than the image of the star which we presently see. It may in fact have ceased to exist years ago. The sensations, however, still persist and if brought into contact with a mind result in the phenomenon called seeing a star.

The same will thus be true of all perceived objects although the difference in time lag may not be so striking. Consequently the image within a mind and the physical events which are said to constitute "the object" occupy different space-time regions. The sensations are defined as the non-mnemic elements in perception. Correspondingly, the image of a brain which we see is different than the actual physical brain. The image called the brain seen by an anatomist is comprised of images within his own mind and located in his psychological space. It therefore becomes possible to regard the image of a brain, thought of as a piece of matter, to actually be comprised of thoughts and feelings. The mind as it exists in physical space consists of events which differ from the events which constitute physical objects by virtue of a different organisation. This difference in organisation is

shown by a change in the laws which govern the events. As an example, Russell cites the law of gravity with respect to matter as opposed to the law of association as regards mind. With this summary, we are now in possession of the bare outline of Russell's solution to the mind-body problem.

After The Analysis of Mind was published, Russell continued to elaborate his theory of mind, especially with respect to the crucial area of his solution to the mind-body problem. The elaboration is concerned chiefly with his theory of perception. We will devote this chapter to an analysis of that theory and its bearing upon Russell's solution.

Under the influence of William James, as we have seen, Russell changed his theory of perception in 1919. His earlier theory had held to the relational character of perception as being between the "subject" and the "object" perceived. He came to the view that such a theory was based upon an oversimplification and ceased to maintain that sensations were in their own nature relational occurrences. As he explained it in My Philosophical Development,

I do not, of course, mean to say that when I see something there is no relation between me and what I see; but what I do mean to say is that the relation is much more indirect than I had supposed and that everything that happens in me when I see something could, so far as its logical structure is concerned, quite well occur without there being anything outside me for me to see. (P. 13.)

Russell's analysis of perception reduces perception to descriptions of content. As such, mind is presented as essentially verb-like in that mental occurrences are not viewed as subject-object relations. Sensations, no longer purely mental, become, therefore, actual constituents of the physical world, and, as

we have seen, comprise the intersection set between the two classes - mental and physical events.

Accordingly the sensation that we have when we see a patch of colour simply is that patch of colour, an actual constituent of the physical world, and part of what physics is concerned with. A patch of colour is certainly not knowledge, and therefore we cannot say that pure sensation is cognitive. (Ibid., p. 136.)

The difference between perception and sensation is that the latter is derived from external stimuli, whereas the former involves associations and habits based upon previous experiences: thus the definition given in the earlier chapter of sensation as the non-mnemic element in perception.

There is, however, Russell maintains, a relation between the data of private experience and the structure of the external world. To clarify what structure means in this context, he employs the example of a gramophone record:

... gramophone records do not in any obvious way resemble the original speech, and yet, by a suitable mechanism, they can be made to reproduce something exceedingly like it. They must, therefore, have something in common with the speech. But what they have in common can only be expressed in rather abstract language concerning structure. (Ibid., p. 19.)

Structure, then, is concerned with the logical structure of events: that is, with the form of their organization. But it is incapable of dealing with their intrinsic character. We can only, according to Russell, know the intrinsic nature of our own experience and nothing else.

From his investigation of perception he comes to the conclusion that

... in most places at most times, if not in all places at all times, a vast assemblage of overlapping events is taking place, and that many of these events, at a given place and time, are connected by causal chains with an original event which, by a sort of prolific heredity,

has produced offspring more or less similar to itself in a vast number of different places. (Ibid., p. 20.)

An event, we are told, occupies a finite region of space-time which overlaps with other events partially occupying the same region of space-time.

The events occurring in any given small region of space-time are not unconnected with events occurring elsewhere. On the contrary, if a photographic plate can photograph a certain star, that is because an event is happening at the photographic plate which is connected by what we may call heredity with the star in question. (Ibid.)

These events connected by "heredity" can be further collected into "families" proceeding from an original "progenitor". Successive "generations" of a single branch of a "family" resemble the original "progenitor" depending in various ways upon other modifying events. The seeing of a star consists of the original star (progenitor) causing a series of events connected by heredity which undergo modifications according to other events in the intervening medium.

From this point the events create a stimulation of the central nervous system via the retina of the eye, which results in the creation of the data of private experience.

People are puzzled because the seeing of the star seems so different from the process that the physiologist discovered in the optic nerve, and yet it is clear that without these processes the man would not see the star. And so there is supposed to be a gulf between mind and matter, and a mystery which it is held in some degree impious to try to dissipate. I believe, for my part, that there is no greater mystery than there is in the transformation by the radio of electromagnetic waves into sounds. (Ibid., p. 22.)

One of the most important outcomes of this line of thought has to do with the subsequent division of space into "private" space and "physical" space.

When two people look at a given object there are differences between what they see owing to perspective and the way the light falls. There is no reason to single out one percipient as seeing the thing as it is. We cannot, therefore, suppose that the physical thing is what anybody sees. (Ibid., p. 103.)

It therefore becomes necessary to posit two forms of space, the private space of any given observer and the physical space in which he is actually contained.

According to this theory, when I see a star, three places are involved: two in physical space and one in my private space. There is the place where the star is in physical space; and there is the place where I am in physical space; and there is the place where my percept of the star is among my other percepts. (Ibid., p. 106.)

Consequently:

There is space in the world of my perceptions and there is space in physics. The whole of the space in my perceptions, for me as for Leibniz, occupies only a tiny region in physical space. (Ibid., p. 25.)

The only space of which we have immediate knowledge, argues Russell, is our own private space.

What I maintain is that we can witness or observe what goes on in our heads, and that we cannot witness or observe anything else at all. (Ibid., p. 26.)

As a result of this division, each mind becomes sealed within its own compartment of private space, occupying a particular space-time region. All we are immediately aware of resides in this private space which affords the data of our experience.

Physical space becomes the domain of physics and is totally inferred from the data afforded through private space data being defined as: "... all the things of which we are aware without inference. They include all our observed sensations - visual, auditory, tactile, etc." (Ibid., p. 23).

Claims of knowledge about the inferred world of physics are made possible

by the assumption of structural similarities. The difference between the physical world and that as presented by the data of our own experience is emphasized.

Russell is quick to add that there is still the possibility of much closer resemblances than physics at first seems to suggest, just as the structural similarity between the speech and the gramophone record produce almost identical effects.

The impact of this theory is dramatic when applied to what is normally considered to be the physical brain. The star which we see is not in itself the star, but rather the effect of events emanating from a portion of space-time, making themselves known as data in another space-time region. In an identical fashion, the brain that we see is not the physical brain at all:

It is the effect in you of a long causal process starting from the brain that you say you are looking at That brain is a remote effect of the physical brain. And, if the location of events in physical space-time is to be effected, as I maintain, by causal relations, then your percept, which comes after events in the eye and optic nerve leading into the brain, must be located in your brain. (Ibid., p. 26.)

Thus,

What I maintain is that the occurrence in the brain is a visual sensation. I maintain, in fact, that the brain consists of thoughts - using "thought" in its widest sense, as it is used by Descartes. (Ibid., p. 25.)

Consequently, the mass of grey coloured tissue normally believed to be the physical brain becomes a datum of our experience located in private space. Taking the example of a doctor performing an autopsy in which he removes the brain and holds it in his hands, we may ask what exactly is happening. Russell would say that the surgeon never really sees the physical brain. The physical brain, located outside of his private space, is a locus of events occupying a

particular space-time region. As a progenitor, it inaugurates a chain of events which emanate in all directions from that space-time region. These events may be gathered into bundles in two ways, as all the events which are appearances of one "thing" or all the events which are appearances of the one "thing" in a particular location in physical space. An observer will occupy one position in physical space while that which he is observing will occupy another. Each position in physical space will, moreover, be a region of space-time. The events emanating from the physical brain will travel to another region of space-time where they will, if they come into contact with a mind, create sensations in a fashion like that in which electro-magnetic waves are received by a radio and changed into sound waves. These sensations will cause images which are located in that particular space-time region, but which are translated into a three dimensional complex of private space.

Therefore, the object called the brain will have three locations. First it will have its own location in physical space, the place where it is in its own right. Secondly, the image of the brain will have a location of its own in physical space located in the brain of the surgeon. Thirdly, the image of the brain will become part of a three-dimensional complex occupying a position in the visual manifold of private space. In simpler language, then, the brain has only one true location in physical space whereas the image of the brain will have another. The latter is rendered more complicated since the image will have one position in physical space, namely somewhere in the brain of the surgeon, and another in psychological space. To the physician looking at the brain it will be located in his hands. According to

physics, both the image of the brain as well as the image of his hand will have only one position, that being in his physical brain.

The real brain, just as the real star, will have a location in physical space which must be inferred. The physical brain will also occupy its own space-time region. The progenitor inaugurates a series of events which, if they come into contact with a mind, will result in the process called "seeing a brain". As Russell indicates, the observer need not necessarily be a mind. It can as easily be a photographic plate which will yield a perspective from a given space-time region.

A sensitive instrument, such as a photographic plate, placed anywhere, may be said in a sense to "perceive" the various objects from which these causal lines emanate. We do not use the word "perceive" unless the instrument in question is a living brain, but that is because those regions which are inhabited by living brains have certain peculiar relations among the events occurring there. The most important of these is memory. Wherever these peculiar relations exist, we may say that there is a percipient.

(Ibid., p. 26.)

Russell considers one of the most distinctive characteristics of mind to be memory. We may recall from the previous chapter that it is this which he claims to be responsible for continuity of experience and also for the storage and incorporation of sensations into mnemonic phenomena. These considerations result in his definition of "mind" as

... a collection of events connected with each other by memory-chains backwards and forwards. We know about one such collection of events - namely, that constituting ourself - more intimately and directly than we know about anything else in the world. In regard to what happens to ourself, we know not only abstract logical structure, but also qualities.... This is the sort of thing that we cannot know where the physical world is concerned.

(Ibid., pp. 26-7.)

Russell summarizes the three main points of his theory as being:

- I The entities of mathematical physics are not the stuff of the world. They are constructions of events which are taken as units for the sake of convenience.
- II Everything that we experience directly or the data of our experience belongs to our own private world. "In this respect, I agree with Berkeley. The starry heaven that we know in visual sensation is inside us. The external starry heaven that we believe in is inferred." (*Ibid.*, p. 27.)
- III The events which originate from any given source tend towards disintegration as a result of other events. "The third point is that the causal lines which enable us to be aware of a diversity of objects, though there are some such lines everywhere, are apt to peter out like rivers in the sand. That is why we do not at all times perceive everything." (*Ibid.*)

He considers that the most important part of his theory in relation to the removal of the traditional mind-body problem is the distinction between physical and private space which he had originally formulated on New Year's Day in 1914.¹

All the puzzles about the differences between different people's perceptions of one thing, and about the causal relation between a physical thing and its appearances at different places, and, finally (perhaps most important of all), between mind and matter, are cleared away by this theory. The puzzles have all been caused by failure to distinguish the three places associated with any given percept, which are (I repeat): (1) the place in physical space where the "thing" is; (2) the place in physical space where I am; (3) the place in my perspective which my percept occupies in relation to other percepts. (*Ibid.*, p. 108.)

The above theory allows for the view that the mind we see consists of "thoughts", in Russell's sense. The image which we see and call the brain is not in fact the brain at all but rather a datum of our experience. With Russell's abandonment of the "subject", the necessity in his account for any purely mental substance disappears. There need be no "I" posited since the entity which it

¹See discussion on this point in Merrilee H. Salmon, "On Russell's 'brief but notorious flirtation with phenomenalism'", Russell: the journal of the

designates can as easily be replaced by a complex of memories, actions, etc. In other words, the self in the sense of something over and above the personal identity of a memory chain is not necessary. What common sense normally supposes to be "the" person is in part the result of the image of a person. The image of a person will not be the physical person itself but rather the effect of events emanating from their position in space-time in a manner identical to that of the example of either the star or the brain.

As a result, the entire character of the problem of mind and matter is changed. The image that we see will be a "thought" and not the physical thing which is located outside of our private space. Also, the entire notion of matter or substance in light of the discussion pursued earlier will be drastically different. According to Russell, matter cannot be viewed as something which persists through time, nor can it be predicated with the qualities of solidity or something hard that you bump into. Thus, there is not the need to explain how thought can emerge from hard pieces of matter. These predicates of matter are derived from sensations of it embedded in common sense or more particularly, in the datum of our private experience. The examples which Russell gives of perception are held as being equally true of all our sensations, be they visual, auditory, tactile, etc. As such, all our knowledge as to the physical thing in itself must be gained through inference or abstraction. Our senses reveal nothing necessarily about the intrinsic nature of external objects. To attempt to explain how mind and

matter interact using only knowledge derived from our sensations is, according to Russell, not valid. We must seek an explanation on the level of inference as to the common features of structure. Hence, he employs events and their groupings which deal only with the structure of the phenomenon in question. This leads him to say, "The supposed problem of the relations of mind and matter arises only through mistakenly treating both as "things" and not as groups of events".²

Russell believes that past attempts toward an explanation have fallen prey to the attempt to explain matter in terms of the common sense notions produced by sensations alone, sensations which, he argues, are not relational, but which exist in their own right as opposed to the locus of events from which they are derived. The intrinsic nature of our own experience of external objects is afforded by the effects of events upon our central nervous system, and do not give us any knowledge as to the intrinsic character of the object external to us with which we never have any direct contact. We only have contact with our own sensations and nothing else. Therefore, the common sense predicates of matter become predicates of our sensations and not of matter itself. Our knowledge of the external world must necessarily be based upon our data of private experience but not limited only by it. This data is used as the basis for inferences which are made as to the structure of the external world rather than to its intrinsic characteristics, the latter of which we can only experience of ourselves.

Explanations have dealt more with the attempt to make intelligible the

²"Mind and Matter", in Portraits from Memory, p. 153. This essay was originally entitled "The Physical Conditions of Thinking".

external world in keeping with the intrinsic character of our own sensations, mistakenly considered as affording the intrinsic character of those objects external to us which cause them. The outcome of this, argues Russell, has been much confusion which can be surmounted with the adoption of his theory.

As a result of this theory, the necessity for the method of logical construction within Russell's philosophy becomes more apparent. Since the impressions and sensations which we experience are peculiar to our own central nervous system, the predicates derived from the senses are viewed as predicates of our sensations and not of the intrinsic character of the progenitors that propagate them. Knowledge of the external world can therefore only be established on the basis of inferences from our private experience. These inferences must consequently be limited to structure since we are only capable of being directly aware of the intrinsic character of our own private experience, not that of other space-time regions.

In conclusion, then, we never come directly into contact with matter but only experience its effects mediated through the senses; any statement as to the relation of mind and matter will have to be based upon inference. Since we are dealing with the structure of matter, the same level will be pursued in respect to mind. This is effected by a concentration upon the empirical aspects of mind, in keeping with Russell's distinction mentioned in Chapter Two, between social and individual knowledge. This is why he chooses in The Analysis of Mind what is essentially a behaviouralist presentation of mental phenomena. Events themselves are devoid of qualitative distinctions. The solution to the mind-body problem is formulated on an abstract structural level. Mind is subject to one set of organising

principles while matter is subject to another. At this level, the distinction is structural rather than qualitative.

... the difference between mind and brain does not consist in the raw material out of which they are composed, but in the manner of grouping
 The events that are grouped to make a given mind are, according to my theory, the very same events that are grouped to make its brain
 ... the difference between mind and brain is not a difference of quality, but a difference of arrangement.³

There are limitations as to what information can be derived from structure.

... an analysis of structure, however complete, does not tell you all that you may wish to know about an object. It tells you only what are the parts of the object and how they are related to each other....⁴

The analysis of structure is also capable of degrees in respect to the various levels at which it can be performed.

The analysis of structure usually proceeds by successive stages.... The ultimate units so far reached may at any given moment turn out to be capable of analysis. Whether there must be units incapable of analysis because they are destitute of parts, is a question which there seems no way of deciding. Nor is it important, since there is nothing erroneous in an account of structure which starts from units that are afterwards found to be themselves complex.⁵

Russell takes the ultimate unit of structure at the present time to be an event.

Positing events as the ultimate constituents of mind, he distinguishes between the organisation of events as either constituting matter or mind. The remaining difficulty becomes that of explaining how mental events interact with physical events in the production of what is called consciousness. We recall from Chapter Three

³"Mind and Matter", in Portraits From Memory, p. 148.

⁴Human Knowledge: Its Scope and Limits, p. 268.

⁵Ibid., pp. 268-269.

that in the analysis of Brentano's divisions of thought into act, content and object, he rejects all of them except the notion of content. Consciousness is, according to the account given in that chapter, not something simple and irreducible but rather:

... something complex, perhaps consisting in our way of behaving in the presence of objects, or, alternatively, in the existence in us of things called "ideas", having a certain relation to objects though different from them, and only symbolically representative of them.⁶

The bridge between mental events and physical events is provided by the concept of sensations as being intermediate between the two. A physical event makes itself known by being translated by the central nervous system into a sensation. A mental event makes itself known by causing some act of response such that it perpetuates physical events.

An event is not rendered either mental or material by any intrinsic quality but only by its causal relations. It is perfectly possible for an event to have both the causal relations characteristic of physics and those characteristic of psychology. In that case the event is both mental and material at once. There is no more difficulty about this than there is about a man being at once a baker and a father.⁷

A few interesting questions remain at this point. To begin with, Russell talks about making inferences as to the structure or organisation of space-time events. The unanswered question in this is that we cannot tell how much structural similarity there is between our experience of the external world in our private space and the external world proper. We may recall Russell's example of the

⁶The Analysis of Mind, p. 11.

⁷"Mind and Matter", in Portraits from Memory, pp. 152-3.

gramophone record in which the structure of the record corresponds in some way to the original speech and may be played to recreate it. With Russell's philosophy the extent to which our experience of the world is like or unlike the physical world is a question which seemingly cannot be answered. Unfortunately, we possess no comparative means similar to that of cutting and then playing of a record. With the recording we at least know what the original is that is being reproduced. Therefore, we possess a criterion of comparison. In respect to the external world we have no such handy reference.

Another interesting and related point is that Russell's theory admits that there are inbuilt limitations in respect to knowledge of structure since it does not deal with intrinsic characteristics. If this is so, it may be asked what the status of a structural solution to the mind-body problem can assert. Surely this leaves the door open for there being intrinsic differences in the characteristics of mental events and physical events. Admittedly, there may be no way that we can know them, but there still remains the possibility that the limitations of a structural account may be unable to include the possible intrinsic difference between mind and matter. Consequently, it remains a possibility hovering in the background that mind and matter may be distinct in intrinsic characteristics but that we cannot know what the intrinsic character of the latter is. This being so - the problem of mind and matter may be insoluble. We shall now proceed in the last chapter to a final critical assessment of Russell's solution.

CHAPTER V

THE STATUS OF RUSSELL'S THEORY:

SOLUTION OR WORKING HYPOTHESIS ?

We have attempted to demonstrate that Russell's solution to the relation of mind and matter contains many problematic areas of pertinence to philosophical inquiry. This should be of little surprise since it tends to be the case that any theory has the occasional flaw or point of stress when looked at closely enough. As Russell once said, absolute truth belongs in heaven and it cannot be found on this earth. Our thesis has simply been to deny Russell's claim that the problem can be viewed as definitely solved and to this end, certain questions as to the adequacy of the theory have been raised.

In Chapter I we began by presenting Russell's attitude towards philosophy, suggesting that this had considerable bearing upon both his methodology and his solution. Viewing mind as an insignificant part of the universe and denying from the outset any claims as to the spirituality of mental phenomena negates the possible validity of other points of view. This is the first problematic area that we encountered in Russell's philosophy and although we personally side with Russell's attitude, fairness demands the equal recognition of other attitudes which may be equally defensible or indefensible as the case may be. Many would say that Russell's initial stance denies basic problems or refuses to take seriously religious beliefs which are of great concern to others. Whether or not this opinion or Russell's is more valid is

difficult to say, but we can say that there exists a problem here in assessing the relative merit of the various camps in any objective fashion. The relation between attitude and method can be of great importance and we noted in this respect certain of Russell's prejudices in the following chapter. The relationship between attitude and methodology can be likened to the story of the Greek demi-god. Gaining strength anew upon touching the earth, he could only be defeated by being separated from the soil from which his strength was derived. In a similar way, the weaknesses which are discovered during an epistemological analysis of Russell's methodology are diminished by relation to the underlying grounding of his attitude.

In Chapter II we emphasised the second aspect of the movement away from subjectivity by introducing Russell's account of physical subjectivity. Previously we queried the validity of Russell's escape from anthropocentric subjectivity by asking if indeed such a transcendence were possible and left the discussion with this problem suspended in limbo, where it will probably continue to remain. Continuing the discussion of subjectivity we emphasised the degree to which Russell felt that mind was cut off from the external world leading him later to define "mental" as anything that we can know without recourse to inference.

In Chapter III we went on to show that the underlying thesis employed in The Analysis of Mind created problems which may or may not be capable of resolution while retaining neutral monism and the abandonment of the subject. On this basis we argued that Russell's solution could not be held without any reservations since it might prove incapable of being extended as a hypothesis to other areas of philosophy of mind without undergoing some form of drastic revision. This case

was argued on the basis of problems in Russell's account of mind that were immediately derived from his attempt to solve problems in the areas of the mind-body problem such as memory.

In Chapter IV the elaborated theory of mind and matter as presented by the publications subsequent to The Analysis of Mind was put forth. These books included The Analysis of Matter, An Outline of Philosophy, Human Knowledge: Its Scope and Limits, My Philosophical Development and Portraits from Memory, all of which dealt in part with his solution. We ended this chapter by raising the question as to Russell's use of the term "present" in respect to mind which we suggested was not coherently extended from his definition of space-time events. The question was asked as to how the rejection of the subject and the insertion of the picture of mind as being a collection of space-time events could justify the retention of "present" in the unqualified sense that he employs. We noted also that Russell uses the word "image" in a reified sense and that this too seemed to be a direct result of the abandonment of the subject. Furthermore, the issue of structure raises serious questions. In Chapter II we emphasised the gulf that was felt to exist between mind and the external world. Claims to knowledge are made by Russell as the basis of inferences as to structural similarity. We noted that there is, however, no way of assessing such inferences since the original cannot be produced for comparison. In brief, we cannot know how much our experience resembles or does not resemble the characteristics of external phenomena since there exists no comparative criterion.

It has been argued that Russell's solution cannot claim to have definitely

solved the mind-body knot. In keeping with this thesis some of the various problem areas have been presented to show that there remain areas requiring close examination and scrutiny. Its strength as a working hypothesis remains to be assessed. It seems that Russell did not distinguish as much as is the common practice amongst philosophers between a solution and a working hypothesis. Indeed, it may be that he felt them to be one and the same thing. This would explain the assertions "I do not pretend that the above theory can be proved. What I contend is that, like the theories of physics, it cannot be disproved, and gives an answer to many problems which all theorists have found puzzling."¹ and

I did not offer the above theory as the only theory which would explain the facts, or as necessarily true. I offered it as a theory which is consistent with all the known facts and as, so far, the only theory of which this can be said. In this respect it is on the same level as, for example, Einstein's General Theory of Relativity. All such theories go beyond what the facts prove and are acceptable, at least pro tem., if they solve puzzles and are not incompatible with known facts. This is what I claim for the above theory, and it is as much as any general scientific theory ought to claim.²

Russell's theory seems to explain most of the known facts and may be the best tentative hypothesis available at the present time. We draw support for this assertion from the fact that modern neurology has gradually come to hold highly similar theories resulting from the fresh accumulation of data and that some of the claims which Russell made for his theory are still tenable in light of modern research.

It is praiseworthy of the scientific method and the attempts for impartial

¹ My Philosophical Development, p. 27.

² Ibid., p. 108.

knowledge that similar theories can emerge independently from different sources. This would seem to imply that the data suggest the theory rather than that the theory provides the data. This leaves hope that gradual advances may be made and that philosophical inquiry directed in the manner which Russell advocated can ally itself with science to mutual benefit. Russell's theory, then, is viewed in this thesis as a tentative hypothesis and one which contains problematic areas. It may at present be the best map available for gradual and systematic investigation.

Having dismissed the proposition that the mind-body problem has been definitely solved, it remains to assess the validity of Russell's solution as a working hypothesis. We recall that Russell divided events into physical and mental in accordance with the structure of their organization and that the two sets of events intersected in the realm of sensations which were both at the same time. Since the work done by Russell in this particular area certain scientific advances have been made which can be used to strengthen this view.

In an excellent study entitled The Brain: Towards an Understanding by C. U. M. Smith there is presented what is taken by the author to be a new theory as to the relation of the brain and the mind. This theory is called the theory of psychoneural identity. It states that brain activity and mind may be viewed as the same thing looked at from different positions in a manner somewhat like that in which NaCl and cooking salt are the same thing looked at through different perspectives.

Smith mentions research that has been done by neurosurgeons at the

Montreal Neurological Institute where complex imagery has been evoked in the minds of patients employing electrical stimulation of the cerebral cortex. An electrical charge may be transmitted into the brain to evoke imagery, or imagery will create a reading on a cerebroscope. In the latter case, the reading belongs to the "public" world, whereas the former is only accessible on a private basis. He goes on to discuss the possible development of an "autocerebroscope" which, although not presently in existence, is hypothetically capable of being constructed now.

We can imagine that by a suitable arrangement of mirrors and automatic facilities the surgeon could investigate his own brain. This apparatus, or one similar in its essentials, has been called by Feigl and others an "autocerebroscope". Suppose that autocerebroscope is so arranged that the surgeon is able to place an electrode into his own interpretative cortex. On turning on the appropriate voltage he might become aware of scenes from his past, perhaps even of the sky at night. Or, with the electrode placed in his post-central gyrus he might ask someone to pinch his toe. He could then at one and the same time feel the pain and observe the electrical events in his cortex on the screen of the cerebroscope. (The Brain, p. 353:)

He continues:

In both cases the neurosurgeon might describe his experiences under the autocerebroscope into the microphone of a tape-recorder. Later he could play back the tape and listen to his own descriptions. But, and this seems to be the crux of the matter, it is only a description he listens to, not a "recreation" of the experience itself.

Similarly all our descriptions of brains and brain mechanisms, of behaviour (including the behaviour which we call speech) are, simply, descriptions. Optimists believe that in the future it will become possible to "translate" from one set of descriptions to another. For example, reductionists believe that the many and varied activities of an animal's behaviour will one day be explicable in neurophysiological terms. But we can never substitute a description for the thing itself. (Ibid.)

The jump from the description to the thing itself, he argues, can be validated by

the presupposition of structural similarities. According to this account, a certain pattern of sounds coming from the tape recorder actuate neuronal circuits similar to those actuated by the original experience. He refers to this as the ability to "map" experience into words whereby a structural similarity between minds allows the expression of terms with collective meaning.

That this cartography is possible implies that although each of us is unique, we nevertheless possess structurally similar emotional landscapes or, to use Hopkins' term, "inscapes". It is important to notice that it is only the structure, the organization of the inscapes which is common; the individual features, as we have been at pains to emphasize, are unique. It is this which has made the mind/brain duality so intractable. (P. 354.)

Taking his terminology from Russell, Smith then introduces the notion of "egocentric particulars". We can experience, he maintains, metaphorically, our own egocentric particulars as internal to our consciousness. Provided with the use of the autocerebroscope, we can also experience them externally as action potentials in the brain:

The egocentric particular, the "raw feel", is thus a singularity which may be looked at from two aspects. Only in ourselves, with the help of a so far uninvented autocerebroscope, can we know both aspects. In others, despite the help of the poets, musicians and other artists, we can only know the "external aspect". (P. 355.)

It is interesting to note here that Smith has totally confused Russell's notion of an egocentric particular with his division of psychological and physical space. To Russell, an egocentric particular is a word such as "this" or "now". What Smith obviously wants to talk about here is something along the lines of Russell's collective as opposed to individual knowledge.

What is of extreme interest in this book as regards the thesis of

psychoneural identity has to do with experiments performed by scientists on retinal images. According to investigations of the eye, it has been found that the eye is never stationary when focused upon a given object. The eye experiences a high frequency tremor causing the image to change back and forth from one set of retinal photoreceptors to another. An experiment was performed which placed a contact lens on the eyeball such that the retinal image remained stationary. Other research had demonstrated that there are certain neurons which act to trigger certain features contained in the visual field (or what Russell would call psychological space): "These features ranged from lines oriented at various angles to quite complicated geometrical forms" (p. 359). The result of the previously mentioned experiment upon the eyeball was that certain features in the visual field intermittently disappear and reappear.

It is found that when the stabilized image is of a fairly complicated object complete parts of the image disappear and reappear independently of each other. For example, entire straight lines tend to vanish and materialize as units and, in particular, circles seem to have a very high unitary value, tending to disappear and reappear in toto twice as often as any other figure tested. (P. 360.)

From this Smith concludes that:

It seems much more likely that cortical units like those investigated by Hubel and Wiesel are responsible. If this does indeed turn out to be the case we should have another instance where a sensory experience turns out to be an "interior" view of a physiological occurrence. (P. 361.)

What is being suggested here is that in the near future experimentation may prove beyond reasonable doubt the theory of psychoneural identity. The above experiment indicates that the visual field may be likened to a large neon sign

consisting of thousands of small bulbs. When an observer stands back and looks at the sign he can not see the individual parts constituting the whole, he sees solid fields of colour and shape. If we imagine there being an elaborate circuitry for these lights then we can begin to draw certain comparisons with the workings of visual fields. Given that a hypothetical disturbance is introduced into the circuitry of the neon sign, complete areas related to the given affected circuit will cease to light up and disappear.

In regard to the visual field, we may suppose that the actual images or constituents are contained within the brain itself. In the case of mind, our example will be such that the visual field is identical with the neon sign inasmuch as it will be experienced as content rather than object. Certain stimuli will be responsible for triggering off certain neurons with a particular function in respect to the visual field, just as certain electrical currents will be needed to actuate each bulb. If those stimuli are forthcoming then we will experience normal vision. However, if the reception of those stimuli is interfered with, as in the experiment mentioned, then the trigger neurons will be affected. In the case of the neon sign, if a similar disturbance is effected and certain areas of the sign are not functioning, then tracing back the circuitry in respect to that given area will enable the electrician to find the problem area. He will correlate the area of the sign with the co-ordinate circuitry responsible for that area.

It is, in this account, possible to view the internal events as constituting the experience or the experience as constituting the events, both being facets of the same phenomena. In other words, the internal events occurring in the central

nervous system cannot be considered as causing a given state of mind since they are that state of mind looked at in a different way. The inferred internal events will occur at exactly the same time as the state of mind and will be identical. Given the discussion of events already presented and the definition of matter as consisting of these events removed from our sensory presentations of what we take to be the predicates of material substance, it becomes possible to conceptualize at an abstract level the subject matter of our study.

Sensations, according to Russell, comprise the intersection set between physical events and mental events. These events do not differ in themselves, but are distinguished by their organization. The neutral stuff is the same in both cases. Sensations, then, will have both forms of organization apparent in them. From the one side they are physical events and from the other mental. In respect to causality, they appear simultaneously, since as events they occupy a particular portion of space-time. Thus they can be interpreted from two sides, and yet they are both sides of the same coin. It follows that to say that a particular state of mind produces certain physical changes is incorrect since that state of mind will be identical to the events which constitute it.

It is important to separate out the two levels of explanation here lest they become entangled. If sensations are both mental and physical events, it follows that we can frame a coherent description from either side but not from a combination of the two in part. At present, we possess by direct experience the mental aspects of sensations, i. e. we feel pain as pain. Knowledge as to the physical organization must be inferred, and will be as a result patchy where

theoretical gaps remain to be filled. Many explanations on the physical level as a last resort bring in parts from the mental level in order to tentatively fill in gaps. As an example, certain theories on illness bring in the concept of psychosomatic illness, which is said to be of "mental" origin as if in some way "mental" could be removed from "physical" in respect to the person. From our account it follows that a category mistake is being made which can create great confusion. It may be that certain illnesses have their origin in the central nervous system. According to the theory presented here, the mental "causes" of the physical state will be one and the same and incapable of separation. The use of the term "psychosomatic" will, therefore, appear as a device employed where no direct physical occurrence can be found at present to explain other physical occurrences. This being so, the term is employed in explanation because at present no other explanation is forthcoming. It is used until such time as it can be abandoned, but while it is used it produces a category blunder if not understood for what it is. It creates the notion of something purely mental effecting physical changes, and thereby reinstates the kind of duality which theories like Russell's attempt to remove.

Russell's theory and the theory of psychoneural identity are in essence putting forth a similar argument which has been called also the double-aspect theory. R. J. Hirst, in his contribution to the volume Human Senses and Perception³ admirably presents both the strengths and weaknesses of the double-aspect theory.

³C. M. Wyburn, R. W. Pickford, R. J. Hirst, Human Senses and

As an hypothesis, it is not free of problematic areas which he both clearly and precisely indicates. In terms of its explanatory ability, Hirst concludes that it is the best working hypothesis at present. This he argues on the basis that it removes certain difficulties which other theories are unable to dispel. The double-aspect theory is economical and does not necessitate the introduction of a mental substance different from physical objects. It does not assert a causal relationship between mind and brain. Furthermore, Hirst maintains, "It avoids the unnoticed shift of viewpoints from that of scientific observer of the physical and publicly observable causal process up to the brain to that of the percipient introspecting or having private experiences", and "Instead of ignoring the enormous difference in mode of access of percipient and external observer, the suggested theory makes integral use of it in claiming that the experiences and the brain activity are co-ordinate aspects of the 'whole activity' of the living organism." Finally, it avoids circularity by viewing perceptual consciousness as "adverbial", or as a "mode of activity", in that it does not "duplicate either of the supposed transitive relations between person and external object or of perceiving as understood by common sense".⁴

Thus the double-aspect theory seems at present to be the most satisfactory working hypothesis combining what Feigl calls "had-in-experience"

Perception. The authors are individually responsible for Parts I, II and III respectively (which have no titles).

⁴Ibid., p. 330 for the last three quotations.

with "knowledge by description".⁵ These expressions sound vaguely reminiscent of Russell's distinction between knowledge by acquaintance and knowledge by description. It is, however, always reassuring to have the same discovery made more than once. Russell's theory as to the relationship of mind and matter may prove to be the best available working hypothesis, and if we are to believe some recent commentators it is gaining ground with some researchers.⁶ In conclusion, one may well ask what is the matter with Russell's theory of mind. We have answered by emphasizing the distinction between a tentative hypothesis and a solution. The former may, as the evidence accumulates, evolve into the latter, but as it stands the mind-body problem remains as always - problematic.

⁵See H. Feigl, "The 'Mental' and the 'Physical'", in Minnesota Studies in the Philosophy of Science, 2 (1958), 370-498, esp. 445-6.

⁶See Maxwell, op. cit., esp. pp. 177-8.

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