SOME REMARKS ON RUSSELL'S ACCOUNT OF VAGUENESS

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When Gilbert Murray approached Bertrand Russell, in September 1910, to write for his series, he knew what he wanted: a lucid philosopher who had the necessary academic background to write on a variety of philosophical issues. The projected book – later to be called *The Problems of Philosophy* - would encompass a wide range of problems and would be targeted at a projected audience of 75,000. In order to have this mass appeal, Russell's text needed to be written, in Murray's words, "in the lowest terms." (September 19, 1910) There can be no doubt that Russell satisfied the requirement on breadth of philosophical expertise, and Murray recognized this. However, it was the requirement of accessibility that featured most prominently in Murray's estimation of Russell as a philosopher.

After stressing Russell's ability to write in a detached manner – "to write with great detachment from the conventional schools" – Murray challenges Russell to find another philosopher who can meet three important criteria:

- The philosopher must be "completely alive and original,"
- "democratic, so that he wants to communicate his thoughts to shop-assistants,"
- he needs to be "sharp-edged and not wobbly or sloppy in thought." (September 19, 1910)

In order to reach the projected audience of 75,000 readers, the author of *The Problems of Philosophy* had to be clear. If anyone could produce a concise philosophical text intelligible to the masses – including the local shop assistants – it was Russell.

Murray was not the only one to regard Russell so highly. Russell's arch critic and most prominent student, Ludwig Wittgenstein, was unsparing in his praise of his professor's ability to express his ideas lucidly. So much so, that when Russell began to write and publish on religious and spiritual matters, as a result of his liaison with Lady Ottoline Morrell, Wittgenstein was incensed. As far as Wittgenstein was concerned, the paper "The Essence of Religion" was a travesty. This excursion into the spiritual realm that was published in *The Hibbert Journal* in October 1912, apparently lacked the precision Russell's other works possessed. Russell recounts Wittgenstein's scathing reaction in two letters to Lady Ottoline. On October 8 he writes: "Here is Wittgenstein just arrived, frightfully pained by my *Hibbert* article which he evidently detests." [#597] And three days later he throws more light on Wittgenstein's objections:

Wittgenstein was really unhappy about my paper on religion. He felt I had been a traitor to the gospel of exactness, and wantonly used words vaguely; also that such things are too intimate for print. I minded very much, because I half agree with him. [From CPBR Vol. 12, pg. 111. My emphasis]

A "traitor to the gospel of exactness wantonly [using] words vaguely." Wittgenstein certainly knew how to drive his objections home! Comments like these from Wittgenstein and Murray leave us in no doubt that Russell has the reputation among his peers for writing clearly and precisely. And Russell's pained remark to Lady Ottoline that he "minded [Wittgenstein's criticisms] very much, because I half agree with him" strongly suggests that Russell viewed himself - to continue with Wittgenstein's metaphor - as a priest to precision. That Russell is motivated by the desire for clarity and precision in his thought becomes apparent when we recall what he says about his magnum opus, Principia Mathematica.

In an address to the Jowett Society in Oxford in 1923, Russell reminds his audience about the reasons for developing his formal notation in *Principia*:

You all know that I invented a special language with a view to avoiding vagueness, but unfortunately it is unsuited for public occasions. I shall therefore, regretfully, address you in English...(84, my emphasis)

The intricate formal notation presented in the three volumes that constitute *Principia Mathematica*,

according to Russell, has been explicitly designed to overcome a shortcoming that he views as endemic to natural languages, such as English. While this so-called "special language" might not be suitable "for public occasions", at least one of its admirable traits is that it avoids "vagueness." So what is vagueness? Or more importantly, what is Russell's understanding of vagueness?

Russell devoted eight years of the prime of his life¹ to develop "a special language with a view to avoiding vagueness." In the light of this fact, it is surely not unreasonable to expect to find an account of the condition that this notation has been designed to avoid. And where Russell is concerned – given his reputation as a leading philosopher and logician, and his remarks above to the Jowett Society - are we not entitled to find a fairly full, lucid rendition of the malady that his formal notation is meant to circumvent? Surely, if anyone can explain what vagueness is, it must be the² author of Principia Mathematica? Unfortunately, as I shall demonstrate, Russell's treatment of vagueness leaves much to be desired. As my analysis will make clear, Russell's own account of a concept vital to his joint gargantuan project with Whitehead is unclear, if not outright incoherent. This is most unfortunate, given the significance Russell attributed to his "special language" and its role in the resolution of philosophical problems. Let us begin with an investigation of the source we are entitled to regard as the primary source for insights into Russell's conception of vagueness: namely Principia Mathematica. What does he say here about this important concept?

Section One: Principia Mathematica and vagueness

Students who consult *Principia* for an account of vagueness are likely to be disappointed. As even the most cursory of investigations reveals, the volumes are replete with mathematical symbols, interspersed here and there with brief explanations and analyses of the symbols and ideas under consideration. The most sustained discussion in the text occurs in the introduction, where Russell presents *the objectives* of *Principia*. Now we have seen that Russell explicitly informed his audience at the 1923 meeting of the Jowett Society that "the special language" that he had invented had been designed "with a view to avoiding vagueness." As he sees it, this is at least one of the reasons for its development. So perhaps a consideration of his introductory statements on the objectives of *Principia* will yield insights into his conception of vagueness? What then are the stated objectives of *Principia*?

The introduction to *Principia* informs us that the mathematical logic in the text has been designed to accomplish three objectives:

- In the first place, the mathematical logic, apparently, will enable one to effect "the greatest possible analysis of the ideas with which it deals and of the processes by which it conducts demonstrations." ³
- Secondly, this notation, apparently, will enable individuals to express *mathematical* propositions with perfect precision
- And thirdly, this set of symbols, apparently, will make it possible to "solve the paradoxes which...have troubled students of symbolic logic and the theory of aggregates." 4

What is most unusual about this list of objectives is that nothing has been said here about "avoiding vagueness." There are no explicit references to this issue where we would expect to find them. Had Russell been as concerned about vagueness and its avoidance when he wrote *Principia*, as he appears to be when addressing the Jowett Society 1923, he would surely have included a direct reference to this issue in his introduction to *Principia*. More pointedly, had the avoidance of vagueness been a *reason* for developing his notation, Russell would surely have said so when discussing the objectives of *Principia*.⁵

This shortcoming with the introduction to *Principia* belies an even more serious problem. It turns out that there is absolutely no account of this crucial concept in *Principia Mathematica*. As a matter of fact, the word "vague" occurs only once in the three volumes and this only in passing! On page twelve Russell briefly refers to Cantor's definition of the continuum, and reminds us that

a definition is a "making definite": it gives definiteness to an idea which had previously been more or less vague.⁶

As far as I have been able to determine, neither the word 'vague' nor any of its cognates⁷ occurs again in the one thousand nine hundred and ninety-two pages that constitute the book *Principia Mathematica*.⁸ So

students looking for insights into Russell's *Principia* conception of vagueness will be better served looking elsewhere. As neither a consideration of the stated objectives of *Principia*, nor an investigation of the text itself is likely to reveal useful insights into Russell's conception of vagueness, we *must* turn our attention to other sources. To the best of my knowledge the sources that are most useful for our purposes are *The Problems of Philosophy* and the address Russell delivered to the Jowett Society in 1923. Let me begin with the least explicit of these two sources; namely the first chapter of *The Problems of Philosophy*.

Section Two: The Problems of Philosophy and vagueness

There is only one direct reference to vagueness in *The Problems of Philosophy*, and it occurs very early in the text: namely, in the first paragraph. Unfortunately for us, it is not clear why Russell refers to this concept. After telling us that "philosophy is...the attempt to answer...ultimate questions," he asserts that in philosophy we must acknowledge, "all the *vagueness and confusion* that underlie our ordinary ideas." Some preliminary remarks on this assertion are in order before we consider what Russell might mean by vagueness in *The Problems of Philosophy*.

In the first place, we need to notice that Russell is *not* explicitly suggesting here that our (ordinary) ideas are vague and confused. As he sees it, there is a vagueness and confusion *underlying* our ordinary ideas i.e. some *other* phenomenon, that is presumably related to our ordinary ideas, is regarded as vague and confused. Of course, this could still entail that our ordinary ideas are also vague and confused, but Russell has not explicitly established this connection. To use an analogy: the air in the oven might be warm, but the roast that has just been taken from the refrigerator need not be warm as well – in fact, it might still be cold. Russell's proposal, strictly speaking, appears to be that philosophy reveals the vague and confused *contexts* in which our ordinary ideas exist. 12

In the second place, notice that Russell speaks about "vagueness and confusion." (My emphasis) Two concepts are invoked here. With his determination to write well and presumably to avoid unnecessary repetition, these must surely be regarded as separate concepts. That is to say, "vagueness" and "confusion" are surely not to be regarded as synonymous terms? If I am correct here, it seems that as far as Russell is concerned, we cannot use the concept confusion — whatever, this concept involves — to explain vagueness. Given these difficulties, and the infrequent references to the concept vague, one may wonder if it is possible to reconstruct Russell's Problems' conception of vagueness?

I think that we can do this. This concept features prominently in Russell's argument to show that our knowledge of reality "is not *immediately* known to us at all, but must be an inference from what is immediately known." This epistemological argument is a variant of the argument from illusion. A consideration of Russell's account of this line of reasoning will prove useful here, because it reveals at least the context in which Russell uses the term "vague." Admittedly, a consideration of the context in which a term is used is likely to be viewed as a poor substitute for an investigation of the explicit explanations that a writer could provide for the term under consideration, but in Russell's case – at least where *The Problems of Philosophy* are concerned – this is the best that we have to go on.

The example that Russell uses to illustrate his thesis that philosophy reveals "all the vagueness and confusion that underlie our ordinary ideas" is the famous example of the table in his study. While writing his first chapter, Russell looks around him and remarks on the items that he perceives on the desk, in the room and beyond. Had we to ask him to tell us what it is that he is looking at, he might reply as follows: "I am looking at a table." Now suppose we press him to be more specific about the object he perceives. Russell's assessment of the properties of the object that he apparently is looking at will be significantly influenced by a number of factors. To mention a few: he might be overwhelmed by the bright light from the window, and reply that the table is a faint dark blur. Or he might be under the impression that it has a smooth top surface, when closer inspection reveals otherwise. Or he might be sick, and conclude that the table has a yellow tint, while another person with a different ocular condition might conclude that the table is pink. Someone with poor vision might see a fuzzy soft object in the corner of the room, while another sees a sharp, precisely defined object. Russell might see an oblong table, while a friend in a different section of the room might argue that the table is square. Talking about observations of the color of the table, for instance, Russell maintains that

...colour is not something which is inherent in the table, but something depending upon the [object]

and the spectator and the way the light falls on the [object]. 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...¹⁵

This diversity of possible observations leads Russell to conclude that our grasp of reality is not as secure as we initially thought. As the famous table example suggests, a consideration of the perceptual process reveals a feature of the human condition that Russell (implicitly) finds unsettling: namely, that vagueness (and confusion) underlie our ordinary ideas. This fundamental shortcoming, for Russell, manifests itself most forcefully when we attempt to articulate our thoughts about the objects that we have perceived. As far as he is concerned - or so it appears, if my analysis above is correct - the vagueness that underlies our ordinary ideas entails that many statements of the perceived objects and their characteristics can be produced, each possessing at least an initial plausibility. This multiplicity of possible answers that can be produced in response to questions about our observations of the contents and properties of our world leads Russell to conclude that the probability of any one statement being correct is very low. As he bluntly puts it, "any statement as to what it is that our immediate experiences make us know is very likely to be wrong." So Russell's justification of the claim that vagueness and confusion underlie our ordinary ideas in the end amounts to the argument to show that it is possible to generate numerous statements about perceived objects, each one of which characterizes a specific aspect of the object. From this it follows that Russell's conclusion on the improbability of observation statements is viewed by him as logically equivalent to his (initial) thesis on the plight of our ordinary ideas. To say that vagueness underlies our ordinary ideas

- is to say that many observation statements can be articulated, and
- it is to say that each one of these statements is *equally* unlikely to be true.

These two criteria appear to constitute the essence of Russell's *Problems'* conception of vagueness. Let me say a little about the second criterion before considering the third and final section of this paper.

The observation statements that can be generated from our vague idea - at least for Russell in 1911 are of equal standing. Each of these statements, apparently, "has as good a right" to be considered true as the next. As he puts it, "to avoid favouritism" we need to deny that one statement is more acceptable than the rest. But Russell suggested earlier that individual observation statements from the set of statements associated with a vague idea can be assigned a truth-value. As we saw previously, his claim is that "any statement as to what it is that our immediate experience make us know is very likely to be wrong." So it is not our inability to determine the truth status of the individual statements from the set that compels us to treat them equally, but merely the fact that there happen to be many candidates to be considered. With vague ideas, our decision to select a statement that best articulates that idea, from Russell's point of view, will be little more than an arbitrary decision. The selection process will ultimately be founded on whimsical favouritism. Uncomfortable with this suggestion that personal predilections or prejudices can play a role in our attempts to articulate and assess vague ideas - and thus influence our attempts to construct a viable account of reality - Russell brusquely decrees that observation statements be replaced by the (allegedly) more certain statements on sense-data. For convenience I shall refer to this view on vagueness as semantic egalitarianism. In the next section of my paper I shall attempt to show that by 1923 Russell has distanced himself from this conception of vagueness.

Section Three: The "Vagueness" conception of vagueness

My analysis of the *Problems*' conception of vagueness centered on Russell's account of the argument from illusion that he outlined in the first chapter of his shilling shocker. What makes this analysis especially difficult is the paucity of evidence that we have to go on: unfortunately, Russell refers to vagueness only once, and he then proceeds to develop philosophical theses that on the surface appear to have little, if any, connection to his views on vague ideas. The presentation on vagueness that Russell delivers to the Jowett Society in Oxford in 1923 is not beset with these difficulties. On the contrary, Russell says so much on the issue that his address runs the risk of befuddling his audience. I shall not dwell on the confusing aspects of the 1923 account of vagueness. Instead, I'll confine my remarks to those sections of his presentation that bear directly on my concluding comments in the previous section of this paper. More specifically, I shall attempt to show that by 1923 Russell's endorsement of semantic egalitarianism has been

replaced by a different conception of vagueness.

In his address to the Jowett Society Russell relies on a number of examples to illustrate his conception of vagueness. Adopting the view that vagueness is a characteristic "which can only belong to a representation, ¹⁸ of which language is an example" Russell proceeds to show how various words from the English language can be vague. His argument explicitly recognizes *six* categories of words from this natural language:

- 1. predicates such as 'red' and 'bald'
- 2. quantitative words such as 'metre', 'temperature' and 'second'
- 3. proper names such as 'Ebenezer Wilkes Smith'
- 4. abstract words such as 'matter' and 'causality'
- 5. logical words such as 'or' and 'not'
- 6. evaluative words such as 'true' and 'false'

On Russell's view, the words in these six categories manifest the same form of vagueness. While we might assume that proper names, for instance, are unambiguous and therefore different to the other words on the list, closer inspection reveals that these terms manifest the same type of shortcoming that is more apparent with the other terms, such as the predicates. Given that the same sort of vagueness (apparently) infects all the words from our language, and more importantly here, given Russell's reliance on the problems of perception to illustrate and support his *Problems*' conception of vagueness, in what follows I shall restrict my attention to Russell's account of observation predicates. Take his account of the word 'red'.

The word 'red' can be correctly applied to a number of different shades from the color spectrum. However, in addition to these paradigmatic cases, there are numerous instances where the application of the term 'red' is fraught with difficulties. As Russell points out,

since colours form a continuum...there are shades of colour concerning which we shall be in doubt whether to call them red or not, not because we are ignorant of the meaning of the word "red", but because it is a word the extent of whose application is essentially doubtful.²⁰

The application of the word 'red' to the world can therefore either be *certain*, as in the paradigmatic cases, or uncertain. Now Russell concedes that there are numerous possibilities — perhaps an infinite range of possibilities — between the two extremes of being absolutely certain that a term *applies* to an object, and absolutely certain that the term *does not apply* to the object. Nevertheless, as he sees it, there appear to be two separate loosely definable regions that characterize the application of words to the world. That is to say, for Russell, there is a range of *certain* applications, and a region where the application of the term to the world is broadly speaking *uncertain*, but where the boundaries are, we cannot say. As Russell graphically points out,

The fact is that all words are attributable without doubt over a certain area, but become questionable within a penumbra...Someone might seek to obtain precision in the use of words by saying that no word is to be applied in the penumbra, but fortunately the penumbra itself is not accurately definable...²¹

Unlike the earlier *Problems*' conception of vagueness that explicitly regards *each* of the applications of natural language to the world as *equally improbable* – or as Russell put it, "very likely to be wrong" – we now have a conception of vagueness from Russell that explicitly departs from this view on at least *two* counts. These deviations strongly suggest that Russell's overall conception of vagueness is incoherent.

In the first place, we have seen that the 1923 conception of vagueness accommodates both uncertain and certain applications of language to the world. This paradoxical conception of vagueness is central to the metaphor above on the penumbra, and emerges most forcefully from his remarks on the application of the predicate 'bald':

Baldness is a vague conception; some men are certainly bald, some are certainly not bald, while between them there are men of whom it is not true to say they must either be bald or not bald. The law of excluded middle is true when precise symbols are employed, but it is not true when symbols are vague, as in fact, all symbols are.²²

So now words can be classified as vague, even if they happen to have certain or precise applications to the world. At least one of the virtues of the *Problems*' conception of vagueness is that it is consistent: the observation statements associated with a vague idea, without exception, will be improbable.

In the second place, and most important for us, Russell's 1923 concession that applications of vague words can either be certain or uncertain, shows us that by the time he addressed the Jowett Society Russell is willing to discriminate between various applications of language to the world. The set of observation statements that can be generated from a vague idea is no longer viewed by the author of *The Problems of Philosophy* as a *uniform* collection of improbable statements, each one of which is likely to be false. Far from it! Vague ideas can now be associated with observation statements that can be divided into two discernable subsets: namely, the certain and the uncertain. So the *semantic egalitarianism* that appeared to characterize the *Problems'* conception of vagueness by 1923 has given way to a paradoxical *bifurcated* conception of vagueness.²³

These are certainly *not* insignificant deviations from the conception of vagueness that Russell relies on in *The Problems of Philosophy*. If my analysis and arguments are correct, the account of vagueness that emerges by the end of 1923 leaves much to be desired. More specifically, it appears that Russell's view of vagueness is incoherent. For it appears that the composite conception of vagueness that Russell presents to the Jowett Society is unsatisfactory, and conflicts with the simpler *Problems*' conception of vagueness. This is most unfortunate, given Russell's commitment to clarity and his dogged determination to find a logically perfect language. The precise "special language", that he developed "with a view to avoiding vagueness", according to him, would not only help us solve our puzzling philosophical problems, but most importantly, would take us nearer to the truth, and Plato's heaven: a feat that "most other studies", apparently, cannot accomplish. With a more refined and consistent conception of vagueness Russell may well have reconsidered this lofty appraisal of the notation from *Principia Mathematica*.

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ENDNOTES

¹ Russell began the project in 1902 at the age of 30. As the introduction to *The Collected Papers of Bertrand Russell (Volume 12)* points out, the work on *PM* was interspersed with Russell's political engagements:

The rhythm of his work was such that throughout the period 1902 – 10 he could take time only in the winters for political questions...while his work on *Principia Mathematica* took most of his energy during the rest of the year. (xxix)

² The definite article here might be construed as misleading by my audience. Of course, we all know that Russell co-authored *PM* with Alfred North Whitehead. However, for purposes of clarity and brevity, here I shall follow Russell's lead made earlier in his address to the Jowett Society, and refer to him as *the* author of *PM*.

³ Russell 1910: 1.

⁴ Russell 1910: 1.

⁶ Russell 1910: 12, my emphasis. I am indebted to Ray Perkins for pointing out this reference to 'vague'.

⁸ I am referring to the 1925 expanded second edition that was reprinted in 1935, 1950 and 1957. Volume One consists of 46 and 674 pages; Volume Two is 31 and 742 pages long and Volume Three is 8 and 491 pages in length.

¹⁰ Russell 1912, 1: my emphasis

This context, of course, might itself be composed of further ideas. But Russell does not tell us.

13 Russell 1912, 4.

¹⁶ Ibid 1. I am not concerned here with the validity of Russell's argument on this issue. The shift from remarks on the possibility of many statements about an object to the suggestion that they, or that any one, is 'very likely to be wrong' appears unwarranted and could possibly undermine Russell's conclusion here on the accuracy of our perceptual reports.

¹⁷ Russell 1912: 1, my emphasis.

On Russell's view, in addition to language, photographs, maps, perceptions, thoughts, knowledge and beliefs can all serve as representations.

19 Russell 1923: 85

²⁰ Russell 1923: 85.

²¹ Russell 1923: 87, my emphasis.

Russell 1923: 85-6, my emphasis. It is also articulated in the following assertion by Russell:

I think all vagueness in language and thought is essentially analogous to this vagueness which may exist in a photograph. (Russell 1923: 91)

This analogy is misleading. Some photographs are completely out of focus. Some are completely in focus, and some have a central point of interest that is in focus, while the rest of the photograph is out of focus. Perhaps it is the latter that Russell is referring to here. In that case, the depth of field selected by the photographer determines the extent of the departure of that part of the picture that will be in focus from the focused section. So the certain section is the focused section, while the uncertain section is the section out of focus.

There are other deviations, such as the following. The above references to certain applications of language notwithstanding, in 1923 Russell now stresses the "essentially doubtful" relationship between language and the world. Unlike the *Problems'* conception of vagueness that appears to assume that observation statements are *determinable*, in 1923 Russell seems to endorse the view that the truth status of these statements, for the most part, cannot be determined i.e. those statements that articulate vague ideas are *now* viewed as <u>indeterminate</u>. Before we could determine that the statements are all "very likely to be wrong"; now we are locked in a world of uncertainty, living with the fundamental difficulty that the connection between language and the world is "essentially doubtful".

⁵ It must also be pointed out that *the desire for precision* – as in the desire to express mathematical propositions precisely, for instance – is not necessarily the same as *the desire to avoid vagueness*. "Vagueness" and "precision" are not mutually exclusive terms. So Russell's second objective of *PM* is not necessarily the same objective that is mentioned in the Jowett talk.

⁷ By 'cognates' I mean words that are *directly* related to the word in question i.e. they come from the same linguistic family. For example, "vague" has "vagueness" as its cognate, but not "unclear".

This proposal, of course, raises an additional problem. What guarantee do we have that any other source accurately replicates PM's conception of vagueness? And even more fundamentally, does it make sense to assume that there is a single conception of vagueness that underlies PM— would a text that took nine years to complete not presuppose an *evolving* conception of vagueness? Think about it: how many *seconds* (let alone years) does it take for one to change one's idea or conception on anything?

It is easy to make this mistake. I made it in two recent papers on this section of *The Problems of Philosophy*.

¹⁴ One is reminded here of (the later) Wittgenstein's proposal that if one is after the meaning of a word, we need to consider its use i.e. consider the various contexts in which the word is used.

¹⁵ Ibid 2.