RUSSELL AND VAGUENESS

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In this paper I present the philosophical backdrop to Russell's 1923 "Vagueness" paper. I argue that his view of vagueness in 1923 is the result of a rise in the importance of symbolism in his thinking coupled with a new interest in psychology. I show how these new interests are related to concerns he had with his theory of judgment as well as his logicist project. I attend to the two major complaints against his view of vagueness: that all language is vague and his purported conflation of vagueness with generality. I lastly show how Russell's view is distinct from modern approaches to vagueness in so far as he is not concerned with truth-value gaps but instead sees vagueness as applying primarily to what is cognitive and as a transitory position between ignorance and knowledge.

INTRODUCTION

In 1918, Russell tells his audience:

> I should like, if time were longer and if I knew more than I do, to spend a whole lecture on the conception of vagueness. I think vagueness is very much more important in the theory of knowledge than you would ever judge it to be from the writings of most people. (*PLA*, *LK*, p. 180/*Papers* 8: 161)

Russell's remarks are interesting for two reasons. First, vagueness had hardly figured as philosophically important in his earlier writings. In *The Principles of Mathematics* (1903) and *Principia Mathematica* (1910–13) there is next to nothing on vagueness. In *The Problems of Philosophy*

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(1912), the word occurs only once, and just in passing.[1] And in his posthumously published *Theory of Knowledge* (1913) he provides just a short discussion and definition of vagueness as it relates to uncertainty and memory images. Thus we can include Russell's own writings among those that do not say much on the topic of vagueness. Second, Russell speaks of the importance of vagueness to the theory of knowledge, not to logic. The theory of knowledge, for Russell, includes both logic and psychology (*TK*, *Papers* 7: 46). Thus unlike many contemporary views of vagueness, Russell approaches the problem from a context that is not purely logical.

In 1923, Russell published his article on the important topic of vagueness.[2] Most contemporary philosophers agree that Russell's discussion of the phenomenon of vagueness contributed to the formation of the philosophical concept of vagueness and highlighted some of its important aspects. Timothy Williamson, for example, writes that "Russell helped to make the technical sense [of the concept of vagueness] canonical" and that "with him, the problem of vagueness is systematically presented for the first time in something close to its current form".[3]

Still, almost all commentators on Russell's article find his final analysis of vagueness unsatisfactory if not just completely wrong.[4] After highlighting Russell's contribution to the field, Williamson complains that Russell's "official theory of vagueness is worse than an over-simplification; it radically misconstrues the phenomenon" (*Vagueness*, p. 67). Williamson is not alone in his criticisms of Russell's view.[5] Criticized most often is Russell's claim that all language is vague and his final analysis of vagueness in terms of what he previously describes in the

[1] For a comparison of Russell's views of vagueness in *The Problems of Philosophy* and his "Vagueness" article, see Alan Schwerin's "Some Remarks on Russell's Account of Vagueness", *Contemporary Philosophy*, 21 (1999): 51–7.

[2] The paper was read in November 1922 before the Jowett Society at Oxford University. References are to the version in *Papers* 9: 147–54.

[3] Williamson, *Vagueness* (London: Routledge, 1994), p. 37.

[4] Dominic Hyde is one of the few to look at Russell's views favourably. He argues that they are compatible with the representational view of vagueness in his "Rehabilitating Russell", *Logique et Analyse*, 35 (1992): 139–73.

[5] See, for example, Max Black, *Language and Philosophy; Studies in Method* (Ithaca: Cornell U. P., 1949); Marvin Kohl, "Bertrand Russell on Vagueness", *Australasian Journal of Philosophy*, 47 (1969): 31–41; or Bertil Rolf, "Russell's Theses on Vagueness", *History and Philosophy of Logic*, 3 (1982): 68–83.

same paper as generality.

Almost all the discussions of Russell's views on vagueness see them as contributions to the logical problem of vagueness, i.e., as attending to the problem of borderline cases that cause truth-value gluts or gaps[6] and potential problems for the law of excluded middle (LEM) in classical logic.[7] In these sorts of commentary, little discussion is given regarding the roots of Russell's analogy between vagueness and a fuzzy photograph and almost none to the claim that vagueness applies primarily to what is cognitive (*Papers* 9: 154, 151). I think such approaches are limiting and obscure from view Russell's motivations and concerns.

In what follows I look at some of the factors that led Russell to develop an interest in vagueness in order to bring to light its place in his overall thinking. Ultimately, Russell's view of vagueness in 1923 is the result of a rise in the importance of symbolism in his thinking coupled with a new emphasis on psychology. His interest in symbolism can be traced back to two separate but ongoing problems he struggled with; namely, a correct theory of judgment and the reduction of mathematics to logic using the theory of types. Both of these problems are discussed in 1913 with Wittgenstein, who emphasizes symbolism. Like all great philosophers, Russell absorbs these new ideas into his unique philosophical framework and applies them to his own philosophical concerns. In particular, Russell marries his theory of symbolism to psychology.[8]

[6] Vagueness understood as a problem of truth-value gaps is the view that statements containing vague predicates, when applied to borderline cases, have no truth-value. If John has a borderline case of baldness, the statement "John is bald" lacks a truth-value because it is unclear whether or not he is bald. By contrast, when vagueness is viewed as a problem of truth-value gluts, borderline cases are seen to generate too many truth-values. The statement "John is bald", when John has a borderline case of baldness, is taken to be both true and false because it does not seem to be false that John is bald or false that he is not bald. On either conception of vagueness, problems for bivalence, LEM and truth-functionality arise. Complex statements involving truth-functors have "gaps" or "gluts", respectively. For examples of these approaches, see Kit Fine's "Vagueness, Truth and Logic" and Max Black's "Vagueness", both reprinted, along with Russell's 1923 article, in *Vagueness: a Reader*, ed. Rosanna Keefe and Peter Smith (Cambridge, Mass.: MIT P., 1997).

[7] Rolf is one of the few who relates Russell's views on vagueness to physics, but he does not discuss in detail Russell's epistemology or psychology. He is also one of the few to see Russell as attending to much more than just the logical problem of vagueness and suggests it is related to his metaphysics ("Russell's Theses on Vagueness", p. 82).

[8] Monk dubs this Russell's "psychological turn" (Monk, 2: 532). He quotes a 1918

Russell's interest in psychology can be traced back to his readings of the behaviourists while in prison in 1918 (*MPD*, p. 108). One result is a theory of meaning in which images play a crucial role in linking words (or symbols) to the world. It is within this context that Russell develops his view of vagueness. A better understanding of this context will not only shed light on why Russell sees all language as vague and seems to confuse generality with vagueness, but also why he likens vagueness to a fuzzy photograph and considers it to be primarily applicable to what is cognitive (*Papers* 9: 154, 151).

II. SYMBOLISM IN 1923

Russell's 1923 article exhibits a concern with symbolism. At the outset, Russell claims that many philosophical problems arise from confusions in symbolism. One of these problems is inferring properties of language to properties of the world (the fallacy of verbalism). Russell writes, "… language has many properties which are not shared with things in general, and when these properties intrude into our metaphysic it becomes altogether misleading" (*Papers* 9: 147). Two such properties are vagueness and precision:

> Vagueness and precision alike are characteristics which can only belong to representation, of which language is an example. They have to do with the relation between a representation and that which it represents. Apart from representation, whether cognitive or mechanical, there can be no such thing as vagueness or precision; things are what they are, and there is an end of it.[9]
>
> (*Papers* 9: 147–8)

Representation, of which language is an example, is clearly demarcated from that which is represented. Vagueness and precision belong to representation, and "things"—presumably not just concrete objects but abstract ones as well for Russell—are not something that can be vague or precise.

letter to Frank Russell in which Russell writes that he has "reached a point in logic where [he] need[s] theories of (a) judgment and (b) symbolism, both of which are psychological" (*ibid.*).

[9] Thus the ontological view of vagueness, in which it is entertained that objects might be vague, is excluded at the outset.

III. THE RISE OF SYMBOLISM

Russell's talk of representation, and consequently vagueness, stems in part from what in 1923 is a relatively new interest in symbolism. From 1903 to 1918, symbolism plays no significant role in Russell's philosophy. In 1903, for example, Russell sees the symbolic aspect of logic as merely an accidental characteristic of the discipline:

> Symbolic or Formal Logic—I shall use these terms as synonyms—is the study of various types of deduction. The word *symbolic* designates the subject by an accidental characteristic, for the employment of mathematical symbols, here as elsewhere, *is merely a theoretically irrelevant convenience*. (*PoM*, §11; second emphasis mine)

Symbolism in and of itself is unimportant in Russell's logical investigations because his logic deals with propositions, and propositions at this time are not linguistic. Even when he gives up his 1903 view of propositions in 1910 in favour of incomplete complexes that require completion by the act of judgment, his theory of judgment (the multiple-relation theory) is explained in terms of a relation with the entities which the judgment is about, not the symbols.[10]

In 1913, Russell is faced with serious problems in his theory of judgment, in particular those articulated by Wittgenstein.[11] Some of these problems are presented as unsolved[12] in Russell's 1918 "Philosophy of Logical Atomism" lectures, and it is here that we first see symbolism becoming more important for Russell. In that text he writes:

> The description of the subject as symbolic logic is an inadequate one. I should like to describe it simply as logic, on the ground that nothing else really is logic, but that would sound so arrogant that I hesitate to do so. (*PLA*, *LK*, p. 271/*Papers* 8: 235)

[10] *PM*, 1: 44 ; "On the Nature of Truth and Falsehood", *Papers* 6: 122, 124.

[11] Wittgenstein makes several criticisms of Russell's theory. There are many good summaries, for example, Elizabeth Eames' *Bertrand Russell's Dialogue with His Contemporaries* (Carbondale, Ill.: Southern Illinois U. P., 1989), pp. 143–59.

[12] For example, the difficulty in describing the logical form of belief, i.e., that the two verbs involved cannot be on the same level (*PLA*, *LK*, pp. 224–6/*Papers* 8: 198–9).

It is not that the word "symbolic" describes an accidental characteristic of logic as it did in 1903, but rather that the only kind of logic there is is symbolic. The word "symbolic" now captures the essence of logic (though at the same time Russell sees this as misleading because it (now) wrongly implies that there are other sorts of logic). But this does not mean that Russell is now concerned solely with symbols. Symbolic logic is a tool, or part of a technique, of analysis, and one goal of analysis is to discover the "ultimate simples, out of which the world is built" (*PLA*, *LK*, p. 270/*Papers* 8: 234). Thus, developing a correct symbolism is part of a larger metaphysical project for Russell.

Russell's view of logic as a symbolic endeavour and the symbolic nature of propositions can be traced to communications with Wittgenstein.[13] In a reply to one of Russell's letters in 1913, Wittgenstein writes: "I am very sorry to hear that my objection to your theory of judgment paralyses you. I think it can only be removed by a correct theory of propositions."[14] Part of the "correct theory of the proposition" offered by Wittgenstein is the view that a proposition is not a name, is bipolar, consists of a combination of symbols plus a form, and is made true by facts.[15]

In the same text in which Russell announces that logic is symbolic, he presents a symbolic view of propositions similar to that expressed in Wittgenstein's "Notes on Logic" above:

> A proposition is just a symbol. It is a complex symbol in the sense that it has parts which are also symbols.… In a sentence containing several words, the several words are each symbols, and the sentence composing them is therefore a complex symbol in that sense. (*PLA*, *LK*, p. 185/*Papers* 8: 166)

[13] In the Preface to "The Philosophy of Logical Atomism" Russell credits Wittgenstein generally with the ideas discussed (*PLA*, *LK*, p. 177/*Papers* 8: 160). The 1913 "Notes on Logic" form a response to Russell's theory of judgment and sum up part of their discussions during the pre-War period (especially *Notebooks* [cited in n. 15], pp. 96–9 for theory of judgment, pp. 93–6 for propositions, and pp. 104–6 for symbolism).

[14] Wittgenstein, *Cambridge Letters*, ed. B. F. McGuinness and G. H. von Wright (Oxford: Blackwell, 1995). The particular criticism is the well-known one that "$aRb \,.\vee.\, \sim aRb$" should follow directly from the judgment without the addition of any other premise (*ibid.*, p. 29).

[15] Ludwig Wittgenstein, *Notebooks, 1914–16*, 2nd ed., ed. G. H. von Wright and G. E. M. Anscombe [Oxford: Basil Blackwell, 1979], pp. 94, 97–8.

Propositions no longer contain the entities they are about, as they did in 1903 and 1910. What were formerly the entities in a proposition, or incomplete complexes requiring the act of judgment for completion, are now the entities that make up facts. Propositions (sentences) are the vehicles of truth and falsity, and it is facts that make them true or false (*PLA*, *LK*, pp. 184–5, 182/*Papers* 8: 163–6). Propositions are not related to facts the way names are related to particulars (*PLA*, *LK*, p. 269/*Papers* 8: 233). One difference is that there are always two propositions related to every fact, and one will be true, the other false. This shows, for Russell (following Wittgenstein), that facts cannot be named and propositions are not names (otherwise there would be two names for each fact).[16]

One curiosity is that although Wittgenstein's new view of propositions as symbolic is relayed to Russell in the context of problems with the theory of judgment (1913), Russell adopts it (1918) before he actually applies it to his problematic theory of judgment (1919). In other words, Russell expresses the symbolic view of propositions in 1918 as well as the importance of symbolism to logic but he does not replace the objects in judgment with symbols until 1919.[17] It may very well be that Russell did not yet know how to apply it. But he also had another reason for according symbolism a new importance in his thinking: namely, the theory of types. In 1918, contrary to both 1903 and 1910, Russell writes that "the theory of types is really a theory of symbols, not of things" (*PLA*, *LK*, p. 267/*Papers* 8: 232). Thus Russell applies the new role of symbolism to his theory of types before his theory of judgment.

Let us briefly look at how Russell presents the theory of types as a theory about things in 1903 and 1910, before we look at why he may have come to change his mind in 1918. In an attempt to complete the logicist reduction, Russell, in 1903, puts forward his theory of types to block the paradox he discovered in Frege's Axiom V (*PoM*, App. B). Roughly, the paradox arises when one asks whether a particular class, "the class of classes that are not members of themselves", is a member of itself or not. If it is a member of itself, then it is not, and if it is not, then it is. A similar paradox can be generated for properties, and the theory of

[16] *Cf. Notebooks*, p. 97.

[17] *PLA*, *LK*, p. 225/*Papers* 8: 198; and "On Propositions", *LK*, p. 307–8/*Papers* 8: 296–7.

types is meant to block the paradoxes by dividing things, properties and classes into a hierarchy of different logical types so that a class is always one level higher than its members. Given this hierarchy, the question as to whether a class is a member of itself can no longer arise (similarly, a property is always one level higher than the entities to which it applies, and so cannot be applied to itself).

The theory of types is put forward as a metaphysical thesis in both 1903 and 1910 in so far as Russell speaks about entities in the world being ordered in a hierarchy. In 1903 Russell writes: "*A term* or *individual* is … the lowest type of object" (*PoM*, §497). Classes of individuals, or classes as one, are also counted as terms belonging to the lowest type (*ibid.*). For Russell, "the objects of daily life, persons, tables, chairs, apples, etc., are classes as one" and comprise the lowest type of object (*ibid.*). He mentions symbols, or words, but only to say: "It would seem that all objects designated by single words, whether things or concepts, are of this type [the lowest type]" (*ibid.*). The next type is the type comprised of ranges or classes of individuals. A range, according to Russell, is the range of significance of a propositional function (*ibid.*). Russell provides the example of "Brown and Jones" for this second type (the ranges or classes of individuals). To continue, "Brown and Jones" is itself an object, and classes of such objects form the third type, classes of classes of individuals (and so on). In 1903 the theory of types is clearly a theory that classifies things.

Similarly, in 1910, Russell tells us that "the paradoxes of symbolic logic concern various sorts of objects: propositions, classes, cardinal and ordinal numbers, etc." (*PM*, 1: 38). Vicious circles arise when "supposing that a collection of objects may contain members which can only be defined by means of the collection as a whole" (*PM*, 1: 37). The vicious-circle principle, invoked to stop the formation of these illegitimate totalities, states that "Whatever involves *all* of a collection must not be one of the collections" (*ibid.*). The vicious-circle principle blocks the paradoxes by effecting a "division of objects into types" (*PM*, 1: 161). As in 1903, the 1910 theory of types is a metaphysical theory.

But why does Russell write in 1918 that "the theory of types is a theory of symbols, not of things"? One reason is that he sees symbolism as a tool to divide objects into types, just as he sees it as a tool to discover the "ultimate simples, out of which the world is built" (*PLA*, *LK*, p.

270/*Papers* 8: 234).[18] Indeed, in 1918 he writes,

> You can always only get at the thing you are aiming at by the proper sort of symbol, which approaches it in the appropriate way. That is the real philosophical truth that is at the bottom of all this theory of types. (*PLA*, *LK*, p. 269/*Papers* 8: 233–4)

Thus what we are to understand regarding the claim that the theory of types is a theory about symbols is that the theory gives us the correct symbols to use, the ones that approach objects "in the appropriate way".

Once the correct symbols are discovered, the formation of illegitimate combinations of symbols will be obvious. As Russell writes in 1924,

> In its technical form, this doctrine [the doctrine of types] states merely that a word or symbol may form part of a significant proposition, and in this sense have meaning, without always being able to be substituted for another word or symbol in the same or some other proposition without producing nonsense.… "Brutus killed Caesar" is significant, but "Killed killed Caesar" is nonsense.
> ("Logical Atomism", *LK*, p. 334/*Papers* 9: 171)

A correct symbolism is to be isomorphic with reality in so far as "(a) a simple symbol must not be used to express anything complex; [and] (b) more generally, a symbol must have the same structure as its meaning" (*Cambridge Letters*, p. 122). Thus for Russell, the theory of types is about symbols in so far as the different types of symbol reflect the different sorts of object in reality; the theory remains at bottom a metaphysical theory.

It is perhaps because of Russell's metaphysical view of the importance of symbolism that Ramsey complains to Wittgenstein in 1924: "Of all your work he [Russell] seems now only to accept this: that it is nonsense to put an adjective where a substantive ought to be which helps in his theory of types" (20 Feb. 1924, *Cambridge Letters*, p. 197).

The importance of symbolism in Russell's thinking arises within a very

[18] In 1913 Wittgenstein writes to Russell that "… all theories of types must be done away with by a theory of symbolism showing that what seem to be *different kinds of things* are symbolised by different kinds of symbols which *cannot* possibly be substituted in one another's places" (*Cambridge Letters*, p. 25). Russell does not do away with the theory of types but rather defends it as a correct symbolism (*ibid.*, p. 122).

different philosophy from Wittgenstein's. For Russell, a correct reflection of reality by the symbolism excludes illegitimate combinations of symbols. One result is that the paradoxes are avoided, and, it is hoped, the logicist project can be completed. Russell's philosophy becomes even more distinct when he combines his interest in symbolism with his newly developed psychological approach to language and meaning, as we shall see.

IV. FROM SYMBOLISM TO LANGUAGE AND MEANING

In 1918, symbolism, for Russell, includes all language and has both a logical and psychological aspect (*PLA*, *LK*, p. 186/*Papers* 8: 167). After stating that there are several different kinds of meaning (because things of different types are related to their symbols differently as with propositions, substances and properties), Russell writes:

> I think that the notion of meaning is always more or less psychological, and that it is not possible to get a pure logical theory of meaning, nor therefore of symbolism. I think that it is of the very essence of the explanation of what you mean by a symbolism to take account of such things as knowing, of cognitive relations, and probably of association. At any rate, I am pretty clear that the theory of symbolism and the use of symbolism is not a thing that can be explained in pure logic without taking account of the various cognitive relations that you may have to things. (*Ibid.*)

This is Russell's appeal to psychology in order to connect a symbol to what is symbolized. Such a connection, or relation, is what constitutes "meaning" for Russell. In *The Analysis of Mind* (given as lectures in 1919 and published in 1921),[19] Russell elaborates on his view of meaning:

> When we ask what constitutes meaning, we are not asking what is the meaning of this or that particular word. The word "Napoleon" means a certain individual; but we are asking, not who is the individual meant, but what is the relation of the word to the individual which makes the one mean the other. But just as it is useful to realize the nature of a word as part of the physical world, so it is useful to realize the sort of thing that a word may mean. When we are clear both as to what a word is in its physical aspect,[20] and as to what sort of thing

[19] *Cf.* Monk, 2: 551.

[20] For Russell, a word in its physical aspect is "a class of closely similar noises pro-

it can mean, we are in a better position to discover the relation of the two which *is* meaning.[21] (*AMi*, p. 191)

The psychological aspect of the investigation into meaning is the exploration of the relation of a symbol to what it symbolizes.[22] Meaning is psychological at least in part because it requires an explanation of our "various cognitive relations" to things (*PLA*, *LK*, p. 186/*Papers* 8: 167). It is in providing this explanation that Russell (contrary to the behaviourists) sees images as the indispensable links between us and the world.[23] It is from within this context that Russell suggests an analogy between vagueness and a fuzzy photograph and puts forward his claim that vagueness applies primarily to what is cognitive.

V. IMAGES AND VAGUENESS

Thus far we have seen how symbolism, and in their turn language and meaning, rise to importance in Russell's thinking. Meaning, the link between symbols and the world for Russell, requires a psychological explanation in which images play a crucial role in linking symbols to their meanings. In discussing the role of words in thinking in 1919 Russell writes,

> … this is really the most essential function of words: that, primarily through their connexion with images, they bring us into touch with what is remote in time or space. When they operate without the medium of images, this seems to be a telescoped process. ("On Propositions", *LK*, p. 303/*Papers* 8: 292)

For Russell, images are copies of sensations, sensations which are caused by things and are the prototypes of images (*ibid.*). If images are absent,

duced by breath combined with movements of the throat and tongue and lips" ("On Propositions", *LK*, p. 290/*Papers* 8: 282).

[21] In 1959, Russell recalls that he did not develop an interest in language and meaning until 1918: "It was in 1918 that I first became interested in the definition of 'meaning' and in the relation of language to fact. Until then I had regarded language as 'transparent' and had never examined what makes its relation to the non-linguistic world. The result of my thinking on this subject appeared in Lecture X of *The Analysis of Mind*" (*MPD*, p. 108).

[22] *Cf. PLA*, *LK*, p. 186/*Papers* 8: 167.

[23] *AMi*, pp. 158, 201–2, 206–7; *cf.* Monk, 2: 545.

this seems to be because by habit one has come to associate the word with the prototype; this is what Russell means by a "telescoped" process.

Images, Russell continues,

> … are of various degrees of vagueness, and the vaguer they are the more different objects can be accepted as their prototypes. The nearest approach that I can make to a definition of the relation of image and prototype is this: If an object *O* is the prototype (or a prototype, in the case of vagueness) of an image, then, in the presence of *O*, we can recognize it as what we had an image "of". We may then say that *O* is the "meaning" (or a meaning, in the case of vagueness) of the image. ("On Propositions", *LK*, p. 304/*Papers* 8: 293)

Notice that Russell does not here speak of essentially doubtful judgments or truth-value gluts or gaps. Rather, he is canvassing a definition of the relation between image and prototype which also covers cases of vagueness. In fact, he describes vagueness in the same way he describes generality elsewhere; that is, in terms of accepting several objects as a prototype. What is important to see at this point, however, is the strong relationship between words, images and meaning. He goes on: "… a word-proposition … 'means' the corresponding image-proposition, and an image-proposition has an objective reference dependent on the meanings [prototypes] of its constituent images" (*LK*, p. 309/*Papers* 8: 297). For Russell, then, it is through images that our language hooks up with the world; images link symbols to things.

By 1921, word-propositions do not "mean" image-propositions as they did in 1918 since a word evoking an image is now seen as but one of the many associations it shares with its meaning (*AMi*, p. 210). The word "dog" may raise in one's mind an image of a dog, just as an actual dog might, but that is just one of the associations that the word "dog" shares with its meaning. Aside from this difference, the view from 1919 remains pretty much intact: images seem to Russell to be essential to the acquisition of language, and when words operate without the medium of images, the process is telescoped (*AMi*, pp. 207, 203).

Given Russell's focus on the role of images in language and thinking it makes sense why he states in 1923 that "all vagueness in language and thought is essentially analogous to this vagueness which may exist in a photograph" (*Papers* 9: 154). As Russell describes it, a photograph may be "so smudged that it might equally represent Brown or Jones or Robinson" (*Papers* 9: 152). The relation between the photograph and what it

may mean—or more generally between the representing system and the represented system, i.e. natural language and the world—is one–many. In this case, Russell calls the photograph "vague". In the same way, a sentence involving vague words is vague in so far as there is a region of possible facts that may verify it, as opposed to one single fact. Thus this use of the word "vague" is the same as it was when he discussed it in terms of objects and prototypes in 1919 and 1921.

Russell's appeal to images and their relation to sensations in his theory of symbolism also explains why, in his 1923 article, he states that vagueness applies primarily to what is cognitive (*Papers* 9: 151). (Russell writes "primarily" as opposed to "solely" because there are other kinds of representation in addition to images.) Images are cognitive: words, in connection with them, "bring us into touch with what is remote in time or space".[24] Along the lines of the blurry photograph analogy, images can be vague and may have more than one prototype (*Papers* 9: 152; *LK*, p. 304). Moreover, images are copies of sensations and "the knowledge that we can obtain through our sensations is not as fine-grained as the stimuli to those sensations" (*Papers* 9: 150). The result, as Russell sees it, is that the knowledge from the senses is vague and this "infects all words in the definition of which there is a sensible element" (*Papers* 9: 150). Thus vagueness applies to what is cognitive through images and sensations. The preceding claim that vagueness applies primarily to what is cognitive is not present in most contemporary explanations of vagueness, and little attention is given to it by commentators on Russell's article.

VI. COMPLAINTS AGAINST RUSSELL'S VIEW OF VAGUENESS

There are two major complaints against Russell's view of vagueness in 1923. One is against his claim that all language is vague, and the other is against his purported confusion of generality with vagueness. I shall look at each in turn.

Russell spends the first part of his article on vagueness trying to show that all symbols are vague. Proper names, predicates, quantitative words, words applying to space and time, as well as the logical connectives, are all said to be vague (*Papers* 9: 148–9). We saw in the previous section

[24] "On Propositions", *LK*, p. 303/*Papers* 8: 292.

that all words involving a sensible element in their definitions are vague. Russell's overall idea is that simple symbols combine to form complex symbols. Since the simple symbols are vague they make the complex symbols (propositions) vague, and then the logical connectives, which combine complex symbols to make another complex symbol, are in turn made vague.[25]

Recall that for Russell, vagueness (and precision) has "to do with the relation between a representation and that which it represents" (*Papers* 9: 148). In this way, vagueness is a problem of meaning in so far as Russell sees meaning as the relation between a word and the thing it means (*AMi*, p. 191). This view is significantly different from the modern diagnosis of vagueness as, first and foremost, a problem of truth-value gluts or gaps.[26] The modern description of vagueness in terms of truth-value gluts or gaps focuses on propositions or sentences and their truth-values, and secondarily on words. By contrast, there is only a brief discussion of truth-values by Russell because he starts his investigation by thinking of symbols individually, and the connection between symbols and what they stand for.

In Russell's brief discussion of the law of excluded middle he mentions sentences and their truth-values. He claims that LEM is true when precise symbols are employed, but not true when they are vague, as, he argues, all symbols are (*Papers* 9: 148). For Russell the failure of LEM is due to the particular symbols that are vague, and only consequently the sentences. Modern conceptions of vagueness also blame the vagueness of certain sentences on the vagueness of their words, but vagueness is viewed as applicable primarily to sentences, and it is the lack of truth-values for those vague sentences that is the main focus. Very unlike discussions of vagueness by contemporary philosophers, the failure of LEM does not worry Russell *in the least*—all symbols are vague, but we can *imagine* a precise symbolism (*Papers* 9: 151).

[25] Russell argues that the logical connectives are made vague by the vagueness of "true" and "false", which are made vague by the simple symbols which form to make the complex symbols (propositions) to which "true" and "false" apply (*Papers* 9: 150). Moreover, the penumbra is also vague, so one cannot divide propositions into those that fall under true, those that fall under false, and those that fall under neither. There is higher-order vagueness for Russell (*Papers* 9: 149).

[26] We saw earlier (n. 9), that the ontological view is excluded at the outset.

Since commentators on Russell's article give little consideration to his unique philosophical framework in 1923, it is easy to understand why they find many of his views on vagueness questionable. Williamson, for example, argues against Russell's claim that all language is vague and charges him with missing the primary application of "vague", which he takes to apply to sentences and not words:

> On Russell's account, a word is vague just in case it can have a borderline case, in which its application is "essentially doubtful". Now what is essentially doubtful is a judgement, whose proper linguistic expression is a sentence rather than a word. It is essentially doubtful whether *this is red*. A demonstrative and a copula must be added to "red" to form a suitable sentence.… The primary application of "vague" is to sentences, not to words. But the vagueness of a sentence does not imply the vagueness of every word. One vague word is enough.
> (*Vagueness*, p. 55)

This very well might be true given Williamson's view of vagueness. But if one is concerned with meaning and is taking into account the cognitive relations we have to things, the philosophical landscape looks different. As we have seen, Russell starts his investigation by looking at the relation between a symbol and what it symbolizes. The place to argue against Russell is at the level of his theories of symbolism and meaning since that is where his concept of vagueness comes from. Thus when Williamson chastizes Russell for mistakenly applying vagueness to words as opposed to sentences, he fails to see Russell's starting point (even if he still disagrees with it). For Russell, a theory of meaning is part of getting a proper theory of symbolism, and it cannot be ignored. As we have seen, Russell writes that vagueness applies primarily to what is cognitive (*Papers* 9: 151). So it is not even wholly accurate to say that Russell sees vagueness as applying primarily to words *as opposed to* judgments. This is not a defence of Russell's position; rather it is the suggestion that his philosophical world is perhaps importantly different from ours today.

The second criticism often levelled against Russell is that he conflates generality and vagueness. Initially in his "Vagueness" paper, Russell uses the one-many definition that we saw in section v to describe generality, and he differentiates it from vagueness. He states that in the case of vagueness one cannot draw a definite boundary around the possible facts that may verify a sentence and those that do not (*Papers* 9: 150). Thus there will be cases in which the sentence "This is a man", for example,

will be neither definitely true nor definitely false—not because "man" is a general concept (it is), but because the concept of a person is vague (*Papers* 9: 150). As almost every commentator on Russell's article has noted, the distinction between vagueness and generality is short-lived, and just two pages later Russell gives the definition of vagueness in terms of the one-many relation above. Hence the complaint that Russell confuses vagueness with generality seems undeniable.

What is more, Russell conflates generality and vagueness in earlier works as well.[27] In 1919 Russell writes, "In thinking of *dogs in general*, we may use a *vague* image of a dog, which means the species, not any individual".[28] In 1921 he states that "'I met a man' is vague, since any man would verify it" (*AMi*, pp. 182, 209). In both cases, he is explaining generality (in the first case with regard to an image, and in the second with regard to a concept), but he uses the word "vague". In the 1922 Introduction to the *Tractatus*, Russell similarly cites vagueness as a problem of the non-uniqueness of the meaning or reference of symbols.[29] Thus Russell's confusion is not a singular event. This seems to imply either that Russell's confusion runs very deep, or that there is some other explanation for the conflation.

One possible explanation of the conflation is that Russell's view of the distinction between the two concepts is very subtle. Russell does distinguish vagueness from generality in *The Analysis of Mind* (a text, quoted in the preceding paragraph, in which he also does not distinguish the two). He warns that a "vague word is not to be identified with a general word, though in practice the distinction may often be blurred" (*AMi*, p. 184). So there is for Russell a distinction between the two concepts. But

[27] In 1913 he writes: "[T]he relation of 'representing', which holds between images and sense-data, is not one-one; a whole stretch of objects may be represented by a given image, and a whole stretch of images may represent a given object. This fact seems to constitute the logical analysis of 'vagueness'" (*Papers* 7: 176). Note that Russell calls this the logical analysis of vagueness; but it has to do with symbolism (representation), a theory he deems not purely logical in 1918.

[28] "On Propositions", *LK*, p. 303/*Papers* 8: 292; my italics.

[29] L. Wittgenstein, *Tractatus Logico-Philosophicus*, trans. B. F. McGuinness and D. F. Pears (London: Routledge, 1961), p. 8/*Papers* 9: 101. In discussing the logical form of belief, Russell also writes that "[t]he psychological part of meaning … does not concern the logician" (Introduction, *Tractatus*, p. 20/*Papers* 9: 109–10). But this does not mean that the psychological part of meaning is not significant; it remains integral to his theory of symbolism, from which his view of vagueness arises. *Cf.* Monk, 2: 572.

the distinction is very subtle:

> A word is general when it is understood to be applicable to a number of different objects in virtue of some common property. A word is vague when it is in fact applicable to a number of different objects because, in virtue of some common property, they have not appeared, to the person using the word, to be distinct. (*Ibid.*)

What is important about this passage is that it brings to light just how similarly Russell sees vagueness and generality. The fundamental difference between the two notions is not how propositions involving them are made true since both fit the one-many analysis. Rather, the difference is an epistemological one in so far as the objects to which the vague word applies have not yet "appeared, to the person using the word, to be distinct" (*AMi*, p. 184). Russell sees vague words as "preced[ing] judgments of identity and difference" as well as particular and general judgments (*ibid.*). It is not that a person has judged the objects to be identical, but rather has simply "made the same response to them all and has not judged them to be different" (*ibid.*). This view accords well with Russell's claim, cited in section v, that sensations are not as fine-grained as their stimuli. We may not, for example, judge two things to be different based on our sensations that, on later scientific investigation, prove to be so. In subtle contrast to vague words, general words also apply to objects that share a common property, but in this case one has made a judgment of identity (or difference). On this view, vagueness is more like an intermediate position between ignorance and knowledge.

In *The Analysis of Mind* Russell approvingly quotes Ribot, who similarly expresses the view that vagueness is part of the process of acquiring knowledge:

> Intelligence progresses from the indefinite to the definite. If "indefinite" is taken as synonymous with general, it may be said that the particular does not appear at the outset, but neither does the general in the exact sense: the vague would be more appropriate. In other words, no sooner has the intellect progressed beyond the moment of perception and of its immediate reproduction in memory, than the generic image makes its appearance, i.e. a state intermediate between the particular and the general, participating in the nature of the one and of the other—a confused simplification. (Russell quoting Ribot, *AMi*, p. 184 n.1)

On this view, vagueness is a "generic image" that functions like a general image in so far as it has multiple applications. The difference is that it hovers between the particular and the general because it is not yet definite knowledge. On this view also, vagueness relates to what is cognitive.

The preceding conception of vagueness makes no reference to doubtful applications of words, the view that Williamson focuses on from the "Vagueness" article. Russell does, however, discuss "doubtful regions" in *The Analysis of Mind*. After stating that all words are vague, he uses a target analogy to explain vagueness and meaning:

> The meaning is an area, like a target: it may have a bull's eye, but the outlying parts of the target are still more or less within the meaning, in a gradually diminishing degree as we travel further from the bull's eye. As language grows more precise, there is less and less of the target outside the bull's eye, and the bull's eye itself grows smaller and smaller; but the bull's eye never shrinks to a point, and there is always a doubtful region, however small, surrounding it. (*AMi*, p. 198)

Given this analogy, particularity and generality are surrounded by vagueness, and precise names or general concepts would be equivalent to hitting the bull's eye. To extend the analogy further, the words in our vague natural language hit targets but not bull's eyes, whereas symbols in an imagined precise symbolism hit only bull's eyes. Russell does not use the one-many definition of vagueness here, i.e., he does not say that a vague word hits several bull's eyes. But his analogy accords well with the idea of vagueness being part of continuum of knowledge acquisition in so far as vague words are not meaningless (they do hit the target), and thus it might be argued that a "doubtful region" with regard to meaning is not the same as a word's "essentially doubtful" application that results in a truth-value gap (*AMi*, p. 198; *Papers* 9: 148). As we gain knowledge, the target area "grows smaller and smaller" and language becomes more precise (*Papers* 9: 198).

Whether considered as a generic image, part of a continuum toward greater knowledge, or a target, Russell does not present vagueness as precluding a truth-value in the preceding cases. Rather, he states that vague beliefs "so far from being necessarily false, have a better chance of truth than precise ones [whether particular or general], though their truth is less valuable than that of precise beliefs" (*AMi*, p. 183). Similarly, in the "Vagueness" article he writes that "[i]t would be a great mistake

to suppose that vague knowledge must be false. On the contrary, a vague belief has a much better chance of being true than a precise one, because there are more possible facts that would verify it" (*Papers* 9: 153).[30] And further:

Science is perpetually trying to substitute more precise beliefs for vague ones; this makes it harder for scientific propositions to be true than for the vague beliefs of the uneducated persons to be true, but it makes scientific truth better worth having if it can be obtained.[31] (*Papers* 9: 153)

In one way, this is not a conflation of generality and vagueness in so far as Russell is saying that general scientific "truths" can also be vague since science deals in generalities.[32]

[30] And similarly:

… a vague thought has more likelihood of being true than a precise one. To try and hit an object with a vague thought is like trying to hit the bull's eye with a lump of putty: when the putty reaches the target, it flattens out all over it, and probably covers the bull's eye along with the rest. To try and hit an object with a precise thought is like trying to hit the bull's eye with a bullet. The advantage of the precise thought is that it distinguishes between the bull's eye and the rest of the target. For example, if the whole target is represented by the fungus family and the bull's eye by mushrooms, a vague thought which can only hit the target as a whole is not much use from a culinary point of view. (*AMi*, p. 182)

In this target analogy, vagueness is definitely treated like a kind of generality (the fungus family). In terms of the putty example, it is as if a vague word is overflowing with meaning in so far as the putty is said to flatten out all over the target and the bull's eye.

[31] Preceding this quotation, Russell writes:

The process of sound philosophizing, to my mind, consists mainly in passing from those obvious vague, ambiguous things, that we feel quite sure of, to something precise, clear, definite, which by reflection and analysis we find is involved in the vague thing that we start from, and is, so to speak, the real truth of which that vague thing is a sort of shadow. (*PLA*, *LK*, pp. 179–80/*Papers* 8: 161)

On this view, vagueness is unavoidable in the process of attaining knowledge. Note also that Russell uses "vague" and "ambiguous" as near synonyms.

[32] It might be argued that Russell has simply now confused vagueness with unspecificity. But again, it is important to see that for Russell, vagueness attaches to knowledge acquisition; in other words, vagueness sets in when we are not in a position to make the claim more specific due to our lack of knowledge.

The preceding investigations show on the one hand that for Russell vagueness is intimately connected to generality. Both are described as being cases in which words or images may mean more than one object. On the other hand, when Russell discusses a difference, it is that vagueness precedes generality (and particularity) and is part of a continuum toward greater knowledge. Vagueness cannot be eliminated—as we saw with the target analogy—but since it is a matter of degree, it can be decreased—indeed, that is the aim of science. Given the subtle differences Russell sees between vagueness and generality, it is not clear that he completely confuses or conflates generality in his overall thinking about the phenomenon. His writings on the topic also show that except for the "Vagueness" article, the idea that words may have doubtful applications and consequently propositions may lack truth-values is hardly mentioned in the majority of his writings.

VII. CONCLUSION

Our investigations have shown that Russell's interest in vagueness, culminating in his 1923 article, stem from a new view of logic as symbolic coupled with a psychological approach to meaning. Russell's view of logic as symbolic finds its roots in his desire to find a correct theory of judgment and also to complete the logicist reduction using the theory of types. The new focus on symbolism brings Russell, as never before, to consider words and what they mean or represent. His psychological approach to the problem posits images as the link between words and what they mean and shapes his view of vagueness.

Commentators looking solely at the "Vagueness" article are not unjustified in complaining that Russell's argument that all language is vague is unconvincing as it stands, perhaps even odd. But it makes little sense to chastize Russell for failing to correctly address our modern concerns with vagueness. Given the context within which Russell's investigations take place, it is easily seen why his approach to the problem of vagueness is distinct from the modern one. One mark of this distinctness is his overall concern with symbolism and his psychological approach to it, as opposed to the isolated issue of sentences that lack truth-values. By contrast, he generally sees vague sentences as having truth-values. A second mark is his overall view that vagueness applies primarily to what is cognitive and is thus related to our knowledge of the world.

Russell's apparent conflation, or confusion, of vagueness with generality can be traced back to his use of images as the link between symbols and things. The notion of blurry images easily lends itself to Russell's one-many analysis. Contrary to the "Vagueness" article in which Russell differentiates the two concepts by the doubtfulness of the application of a word, the more prevalent distinction in his work is marked by a lack of knowledge in the case of vagueness. Thus vagueness is a kind of necessary transition on the way to acquiring knowledge, though it shares with generality a one-many relation between symbol and symbolized. On this view, it is not wrong to discuss vagueness in terms similar to generality; it is just elliptical. Given these very different concerns with regard to vagueness, and at bottom different conceptions of it, we may want to reexamine the claim that with Russell "the problem of vagueness is systematically presented for the first time in something close to its current form" (*Vagueness*, p. 37).[33]

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