Vagueness, lecture 2: The ideal language theory.

BENEDICT EASTAUGH, *benedict.eastaugh@lrz.uni-muenchen.de*

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1. Ideal language theories

- In an ideal language like Frege's, definitions are stipulative and do not have to correspond to an existing meaning or practice.

- This ensures that one cannot construct semantically defective expressions (e.g. vague ones).

- Frege suggested that vague predicates lack a referent.

- But if a language like Frege's involves a vague predicate, any expression involving that predicate will lack a truth value, because the meaning of the sentence is given by the meaning of its constituents.

- For Frege, sorites paradoxes are a symptom of allowing vague predicates into an otherwise precise language, and treating vague predicates as though denoting sharp concepts.

- For Frege, vagueness is to be eliminated at the beginning of inquiry, otherwise we cannot reason reliably.

- For Peirce, language will always be vague and eliminating vagueness is a cognitive task.

- Peirce attempts to explain indeterminacy of meaning by indeterminacy of use. Vague expressions are those that are *unspecific*: vagueness is a matter of blurred boundaries, where things are neither clearly included nor clearly excluded.

- Both vague and general sentences are indeterminate in that their subjects are not specific.

  - General sentences have use an "every" quantifier, while vague sentences use "some".

  - A *vague utterance* is one where its further determination depends on the utterer. An utterance is *general* when its further determination depends on the interpreter.

– So a vague sentence is true if some way of determining it results in a truth, while a general utterance is true if every way of determining it results in a truth.

2. Vagueness as a property of representations

According to Russell, it is a *category mistake* to think of objects or properties as vague: only the *representations* of objects or properties can be vague.

> There is a certain tendency in those who have realized that words are vague to infer that things also are vague. We hear a great deal about the flux and the continuum and the unanalysability of the Universe, and it is often suggested that as our language becomes more precise, it becomes less adapted to represent the primitive chaos out of which man is supposed to have evolved the cosmos. This seems to me precisely a case of the fallacy of verbalism—the fallacy that consists in mistaking the properties of words for the properties of things. Vagueness and precision alike are characteristics which can only belong to a representation, of which language is an example. The 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. Nothing is more or less what it is, or to a certain extent possessed of the properties which it possesses. [Russell 1923]

3. The infection theory

Russell seems to hold that all language is, "in practice", vague—even the logical connectives.

> Words such as "or" and "not" might seem, at first sight, to have a perfectly precise meaning: "p or q" is true when p is true, when q is true, and false when both are false. But the trouble is that this involves the notions of "true" and "false"; and it will be found, I think, that all the concepts of logic involve these notions, directly or indirectly. Now "true" and "false" can only have a precise meaning when the symbols employed—words, perceptions, images, or what not—are themselves precise. We have seen that, in practice, this is not the case. It follows that every proposition that can be framed in practice has a certain degree of vagueness[.] [Russell 1923]

- The infection theory has been widely criticised, including by Williamson [1994].

- Williamson argues that Russell neglects the relation between the vagueness of words and the vagueness of complex expressions ("enormous and tiny heap" is made up of vague expressions but has no borderline cases; "red or not red" is another).

- Williamson further argues that the vagueness of a sentence does not imply the vagueness of the constituent words (e.g. "Many numbers under 20 are prime" shows "many" to be vague because the other words in the sentence are not vague).

4. Russell's definition of vagueness

One system of terms related in various ways is an accurate representation of another system of terms related in various other ways if there is a one-one relation of the terms of the one to the terms of the other, and likewise a one-one relation of the relations of the one to the relations of the other, such that, when two or more terms in the one system have a relation belonging to that system, the corresponding terms of the other system have the corresponding relation belonging to the other system. [...¶...] [A] representation is *vague* when the relation of the representing system to the represented system is not one-one, but one-many. [Russell 1923]

- In other words, a representation is *accurate* if it is isomorphic to that which is represented.

- A representation is *vague* if it is compatible with many different possible states of affairs (a smudged photo; a small-scale map).

- Borderline cases give rise to vagueness (i.e. referential indeterminacy).

5. Russell and fuzzy properties

- Hyde [1992] argues that Russell's definition of vagueness only applies to *representational vagueness*, not *ontic vagueness*.

- Hyde calls the ontic correlate of vagueness *fuzziness*, and the ontic correlate of precision *sharpness*.

- Russell assumes that the world is sharp (that is, all properties are sharp) and so one-manyness is both necessary and sufficient for vagueness.

- But if the world were not sharp, we could have one-one correlations between *vague representations* and *fuzzy properties*.

References

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