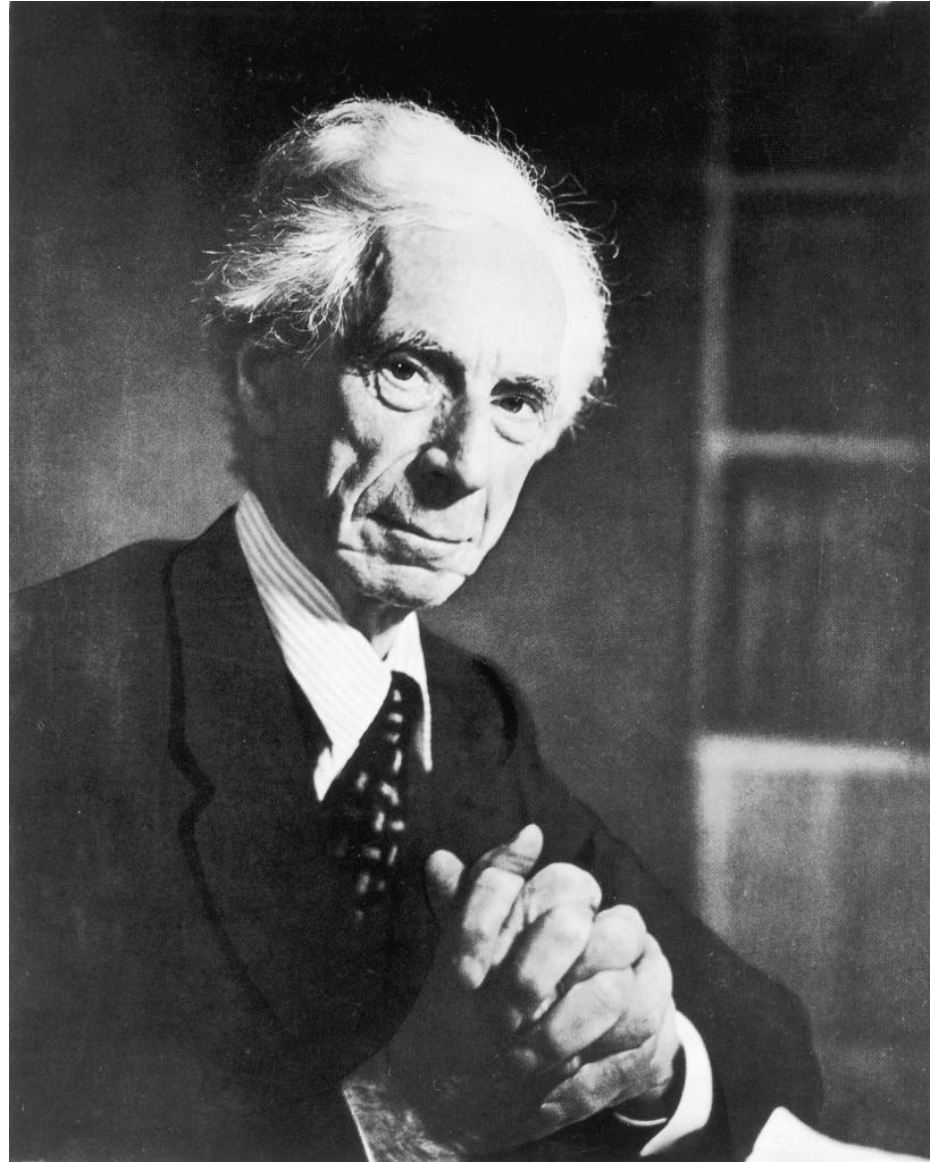


Elements of our toolkit

- **Predicate:** a descriptive phrase, such as in an adjectival phrase. E.g.: “___ is a cat.” “___ is from Texas.” “___ is red.” “___ is a red cat from Texas.”
- **Subject-Predicate form:** interpretation of a sentence as being composed of a subject and a predicate combined. E.g. “Tom is a cat.” This has the subject **Tom** and the predicate **___ is a cat.**
- **Extension:**
 - **Of a name or term:** the things to which a name refers. E.g., the extension of “Tom” is Tom. The extension of “water” is water.
 - **Of a predicate:** the things of which the predicate is true. E.g., the extension of “___ is a cat” is all cats. The extension of “___ is a red cat from Texas” is all the red cats from Texas.
- **Intension:** whatever part of the meaning of a name or predicate that is not captured by the extension.



Bertrand Russell (1872 – 1970)

Some Context

- Russell revolted against the absolute idealism that dominated philosophy in his youth.
- **Idealism** (to philosophers) means the claim that all existing things are ideas. That is: there is one kind of stuff, the stuff of ideas or thoughts, and all is made of this.
- Russell saw the Idealism of his time as being opposed to **realism**. Realism is defined as the view that there can be evidence-transcendent truths. (That's a way of saying: there can be truths that are independent of us.)
- Russell's realism included asserting that some terms refer to actual objects, which could exist independent of thought.
- But there are those puzzling cases of (seeming) reference....

Three old and two new puzzles

1. Malcom X is Malcolm X. Malcolm X is Malcolm Little.
2. Claire believes that Malcolm X is tall. It is not the case that Claire believes that Malcolm Little is tall.
3. Voldemort is tall.
4. Voldemort is tall. Voldemort is short.
5. Voldemort does not exist.

“On Denoting”: Russell’s Underlying Questions

- Are all referring phrases structurally the same in the deep meaning or grammar of the phrase? For example, do they act the same ways in a sentence? E.g.:
 - Are “Abraham Lincoln” and “The Sixteenth President of the United States” functionally similar phrases?
 - Are “Abraham Lincoln is tall” and “The Sixteenth President of the United States is tall” structurally similar sentences?
- Are all sentences that appear to be of a simple subject-predicate form of a simple subject-predicate form?

Some preparatory observations

- Russell makes a mistake (and repeats it for 15 years) of saying “always” and “sometimes” and “never” when he should say “in all cases,” “in some cases,” and “in no cases.”
- In modern logic (partly invented by Russell!), this is all clearer:
 - $C(\text{everything})$ means $\forall x C(x)$
 - $C(\text{nothing})$ means $\forall x \neg C(x)$ which is equivalent to $\neg \exists x C(x)$
 - $C(\text{something})$ means $\neg \forall x \neg C(x)$ which is equivalent to $\exists x C(x)$