

# Russell and Wittgenstein on Logical Atomism

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# Learning Objectives

- ▶ Identify the innovations in Philosophy which occurred in the twentieth century
  - ▶ Discuss the basic problems of “ordinary” language that the Philosophy of Language was trying to solve
  - ▶ Define: Logical Atomism, atomic facts, propositions, elementary propositions
  - ▶ Explain the basic elements of Logical Atomism as theorized by Russell and Wittgenstein
  - ▶ Recognize the benefits and problems with the theory of Logical Atomism
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# Philosophy in The Twentieth Century

- ▶ New emphasis on the nature and role of language
  - ▶ Philosophers now work together – a cooperative effort
  - ▶ Main vehicles for philosophical thought was publication in journals (not books)
  - ▶ All major philosophers are also professors
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# Philosophy of Language

*“I see nobody on the road,” said Alice. “I only wish I had such eyes,” the King remarked in a fretful tone. “To be able to see Nobody! And at that distance too! Why, it’s as much as I can do to see real people, by this light!”*

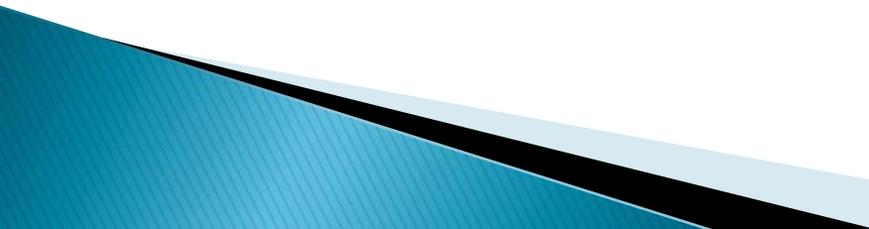
(Lewis Carroll)



# Philosophy of Language

- ▶ Philosophers have always been concerned with language – it is the one tool they have
  - ▶ Philosophers have always been more or less aware that the structure of language forces us into certain interpretations of the world
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# Hegel – Spirit/Mind

- ▶ The collective consciousness of a given society
  - ▶ The ideas we have of the world are social – ideas are shaped by
    - Language
    - Traditions mores of our society
    - Cultural and religious intuitions of which we are a part
  - ▶ Spirit is located neither in objects nor in individual minds, but in a nonmaterial third realm that contains ideas that a whole society has in common
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# Philosophy of Language

## “The round square does not exist”

- ▶ What is it that does not exist = the round square
- ▶ But the *round square* is not nothing
- ▶ Nor is the *round square* an idea
- ▶ Does the *round square*, in some sense, exist in order for us to be able to say that it does not exist

# Philosophy of Language

*“I see a red apple. The red apple is on the table. Baby wants an apple”*

- ▶ What does the word I refer to?
- ▶ When I say “I see a red apple”
  - Reporting sense data?
  - Does the apple *really* exist?
  - Red? Apple?
  - Would the statement that I see an apple be false if it were a dream or a hallucination
  - Does the statement imply the existence of trees
- ▶ Baby wanting the apple – what about the apple is it that baby wants

# Philosophy of Language

- ▶ From one analysis of “I see a red apple” it is possible to construct most of the material world
  - If I say that I see an apple rather than I see a red patch – then I am distinguishing an apple from other objects which must also exist
  - An apple is a fruit that grows on a tree – therefore I imply the existence of fruits, non-fruits, trees, earth, water, food and other people
  - The simplest statement can commit us to a vast metaphysical structure

# Interest in Language Arose in Twentieth Century

- ▶ New forms of symbolisms – Russell and Whitehead Reduce all of mathematics to logic
  - The methods & symbols they developed, seemed to be equally useful in solving philosophical problems
- ▶ Philosophers hoped that it would be possible to construct an artificial logical language
  - Would reflect the real structure of the world
  - Would be free of the pitfalls of ordinary language

# Bertrand Russell (1872–1970)

- ▶ British Philosopher
  - ▶ Made Significant contributions to metaphysics, epistemology, ethics, and political theory
  - ▶ Believed it is the philosopher's job to discover a logically ideal language
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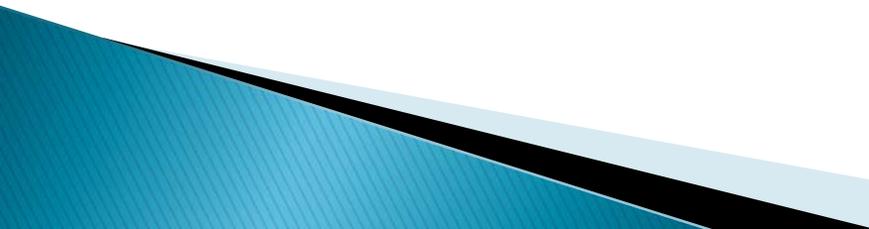
# Philosophical Language

- ▶ A language that will exhibit the true nature of the world – not misled by the accidental surface structure of natural language
  - Atomic facts may be combined into Molecular facts
  - Molecular facts in the world itself
  - General facts (facts about “all” of something)
  - All three needed to complete the picture of the world
    - Vacillated on whether negative facts were also required
- ▶ Allow for the description of such combinations using logical connectives such as “and” and “or”

# Russell's Theory of Logical Atomism

- ▶ Logical Atomism – The theory holds that the world consists of ultimate logical facts (“atoms”) that cannot be broken down any further
- ▶ Atoms and their properties from the atomic facts  
“red” and “apple”
- ▶ Atomic facts are combined to form logically complex objects  
“red apple”

# Russell – Logical Atomism

- ▶ Inferred entities = logical constructions formed from sensation or sense data
  - ▶ Each questionable entity may be reduced to, or defined in terms of, another entity (or class of entities) whose existence is more certain
  - ▶ An ordinary physical object that normally might be believed to be known only through inference may be defined instead
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“as a certain series of appearances, connected with each other by continuity and by certain causal laws.

. . . More generally, a ‘thing’ will be defined as a certain series of aspects, namely those which would commonly be said to be *of* the thing. To say that certain aspect is an aspect of a certain thing will merely mean that it is one of those which, taken serially, *are* the thing” (*Our Knowledge of the External World*)

# Russell – Logical Atomism

- ▶ Sense data are not wholly a matter of inference
  - We know when we are too hot or too cold
  - We can use these sense data to construct the relevant objects of knowledge
- ▶ Two types of knowledge
  - That which is direct, intuitive, certain and infallible
    - Truths about immediate facts of sensation
    - Truths of logic
  - That which is indirect, derivative, uncertain and open to error

# Ludwig Wittgenstein (1889–1951)

- ▶ Born in Vienna
  - ▶ Student of Bertrand Russell
  - ▶ *Tractatus Logico-Philosophicus*
  - ▶ *Philosophical Investigations* (published after his death)
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# *Tractatus Logico-Philosophicus*

## Seven Basic Propositions

- ▶ The world is everything that is the case.
  - 1.1 The world is the totality of facts, not of things.
- ▶ What is the case –a fact – is the existence of states of affairs.
- ▶ A logical picture of facts is a thought.
- ▶ A thought is a proposition with a sense.
- ▶ A proposition is a truth–function of elementary propositions. (An elementary proposition is a truth–function of its self)
- ▶ The general form of a truth–function is  $[p, E, N(E)]$  This is the general form of a proposition.
- ▶ What we cannot speak about we must pass over in silence

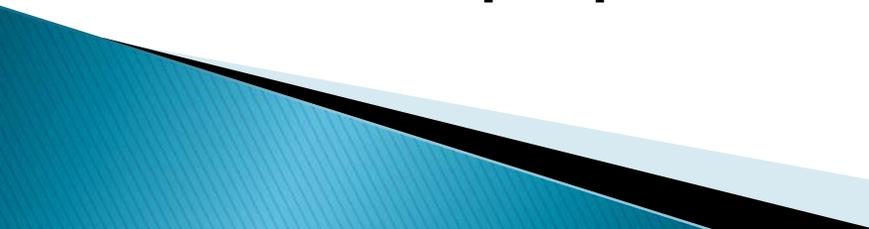
# Wittgenstein – Logical Atomism

- ▶ Main concern is the nature of language and its relation to the world
  - The essential metaphysical doctrine of Logical Atomism is that the world consists of facts, not of objects
  - Facts are existent states of affairs
  - States of affairs are combinations of objects

# Wittgenstein – Picture theory of Meaning

- ▶ The basic unit of language become not the word but the proposition
- ▶ Language consists of propositions which picture the world
- ▶ Propositions are the perceptible expressions of thoughts
- ▶ Thoughts are the logical pictures of facts
- ▶ The world is the totality of facts of my sense experience
  - This is red or
  - Red now

# Wittgenstein – Propositions

- ▶ Thoughts and propositions are pictures in a literal, not just a metaphorical sense
  - ▶ There must be something which any picture must have in common with what it depicts this shared minimum = logical form
  - ▶ Most propositions do not have spatial form in common with the situation they depict
  - ▶ A fully analyzed propositions will consist of an enormously long combination of **elementary (atomic )propositions**
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# Wittgenstein Propositions and Elementary Propositions

- ▶ Makes use an extension of Russell's theory of descriptions
- ▶ Proposition:

*“Austria–Hungary is fighting Russia”*

- ▶ Can be analyzed through its elementary Propositions

# Complex Object into

## ▶ Austria–Hungary is fighting Russia

- For some  $x$  and some  $y$ ,  $x$ =Austria
- And  $y$ =Hungary
- And  $x$  is united to  $y$
- And  $x$  is fighting Russia
- And  $y$  is fighting Russia



Elementary Propositions

- ## ▶ In the sentence thus analyzed, no mention is made of Austria–Hungary, and so we have got rid of one complex object

Example from *A Brief History of Western Philosophy*  
Anthony Kenny

# Wittgenstein

- ▶ Every elementary proposition has a truth function; it can be either true or false
- ▶ The truth-value of propositions of science would depend upon the truth value of the atomic propositions from which they were built up
- ▶ “The apple is red, round, and sweet” – to be true it must be reduced into a series of elementary propositions
  - Apple round
  - Apple red
  - Apple sweet
- ▶ Everyone of the elementary propositions must be true independently of each other for the whole complex statement to be true

# Logical Atomism Benefits

- ▶ Many philosophical problems could not arise under this method of analysis
  - If I see red now, then the atomic proposition that I see red is true
  - No need to ask whether there exists a red apple or a red rose which has existence as an object independently of my seeing red now
  - Round squares cannot hover in some old realm of being – no atomic fact which corresponds to a round square

# Logical Atomism Problems

- ▶ Logical Atomism excluded more than round squares
  - Job of philosophy is to help people list all the facts of natural science
  - For ethics or political theory, justice or happiness or beauty, the job of the philosopher is to point out that he is talking with signs that have no meaning
- ▶ “6.52 We feel that even if when all possible scientific questions have been answered the problems of life remain completely untouched. Of course, there are then no questions left, and this itself is the answer.” (*Tractatus Logico-Philosophicus*)