# Russell's Theory of Descriptions

Ted Sider
Phil Language

## 1. Quantifiers

"Someone is 6 feet tall" means:

> The propositional function "$x$ is 6 feet tall" is *sometimes-true*

The propositional function "$x$ is $F$" is…

> …*sometimes-true* iff it is true for at least one value of $x$
>
> …*always-true* iff it is true for at least every value of $x$
>
> …*never-true* iff it is true for no value of $x$

Reduction to always-truth:

- "$x$ is $F$" is sometimes-true iff "$x$ is not $F$" is not always-true
- "$x$ is $F$" is never-true iff "$x$ is not $F$" is always true

## 2. Sentential connectives

"I met a man" means:

> The propositional function "I met $x$, and $x$ is a man" is sometimes-true

Grammar of sentential connectives:

- If $A$ and $B$ are sentences, then "$A$ and $B$" is also a sentence
- If $A$ and $B$ are sentences, then "$A$ or $B$" is also a sentence
- If $A$ and $B$ are sentences, then "If $A$, then $B$" is also a sentence
- If $A$ is a sentence, then "It is not the case that $A$" is also a sentence

One more example. "Every cat is cute" means:

> "if $x$ is a cat then $x$ is cute" is always-true

## 3. Definite descriptions analyzed away

"The $F$ is $G$" means:

> "i) $x$ is $F$, and ii) 'if $y$ is $F$ then $y = x$' is always-true of $y$, and iii) $x$ is happy" is sometimes-true of $x$

I.e., "There is one and only one winner, and s/he is happy"

## 4. Meaningfulness of empty descriptions

"The present King of France is bald" means

> "$x$ is a present King of France, and 'if $y$ is a present King of France then $y = x$' is always-true of $y$, and $x$ is bald" is sometimes-true of $x$

and all the parts of this sentence have meanings.

## 5. LEM puzzle

(2) the present King of France is not bald

can be analyzed using the theory of descriptions in two ways:

(2a) "$x$ is a present King of France, and 'if $y$ is a present King of France then $y = x$' is always-true of $y$, and not: $x$ is bald" is sometimes-true of $x$

i.e.: There is one and only one king of France, and he is non-bald

Here the description has *wider scope* than 'not'

(2b) not: "$x$ is a present King of France, and 'if $y$ is a present King of France then $y = x$' is always-true of $y$, and $x$ is bald" is sometimes-true of $x$

i.e.: It is not the case that: there is one and only one king of France, and he is bald

Here the description has *narrower scope* than 'not'

## 6. Assertions of nonexistence

"The King of France does not exist" can mean two things, depending on whether the description has wider or narrower scope than 'not':

**narrower** not: "$x$ is a present King of France, and 'if $y$ is a present King of France then $y = x$' is always-true of $y$, and $x$ exists" is sometimes-true of $x$

i.e.: It is not the case that there is one and only one King of France

**wider** "$x$ is a present King of France, and 'if $y$ is a present King of France then $y = x$' is always-true of $y$, and not: $x$ exists" is sometimes-true of $x$

i.e.: There is one and only one King of France, and he is nonexistent

## 7. Failure of substitution

Why can't we substitute 'Scott' for 'the author of *Waverly*' in (3) to get (4)?

(3) George IV wonders whether Scott = the author of *Waverley*

(4) George IV wonders whether Scott = Scott

? Short answer: the definite description 'the author of *Waverly*' doesn't have a meaning, so we can't substitute for it. (It "disappears under analysis".)

The longer answer involves the fact that (3) is ambiguous, depending on whether the description has wider or narrower scope than 'George IV wonders whether':

(3a) There is one and only one author of *Waverly*, and George IV wonders whether Scott = him

(3b) George IV wonders whether: there is one and only one author of *Waverly* who is such that Scott = him

Compare Russell's amusing example of someone who interprets "I thought your yacht was longer than it is" as meaning "I thought your yacht was longer than your yacht".

## 8. The problem with Frege's theory

"If Ferdinand is not drowned, Ferdinand is my only son" means:

> If Ferdinand is not drowned, then there is one and only one son of me, and he is Ferdinand

which is true, even if Ferdinand is drowned and so doesn't exist.

## 9. Frege's puzzle of apriority and analyticity

"The morning star = the evening star" means:

> There is one and only one morning star, and there is one and only one evening star, and these objects are identical.

Which is clearly neither analytic nor apriori.

"The morning star = the morning star" means:

> There is one and only one morning star, and there is one and only one morning star, and these two objects are identical

which is analytic and apriori (except for the fact that there might not exist one and only one morning star!)