



Figure 1: Laika

Definite Descriptions
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1 Russell, Strawson, Donnellan

- Definite Descriptions: Pick out an entity in the world (Figure 1)
 - (1)
 - a. the first dog in space: Laika
 - b. the tallest student in the class: Big Bird
 - c. the 42nd president of the United States: Bill Clinton
 - d. the director of 'Eraserhead': David Lynch
 - e. the present governor of California: Arnold Schwarzenegger
- Russell (1905) "On Denoting". The King of France
 - (2) The present King of France is bald.

- Russell (and Frege’s) Question: What kind of a claim is this?
 - * Claim about an individual? [Like *John is bald.*]
 - * Quantificational Claim? [Like *Every man is bald.*]
- The Problem of Negation:
 - (3) a. The present King of France isn’t bald.
 - b. John isn’t bald.
 - c. These appear to be semantically parallel, a claim of hair-presence for an individual.
 - d. But then what does (a) *mean* (given that there is no present king of France)?

Quantified NPs don’t suffer from the problem of negation

- (4) a. Not every king is bald.
 - b. (a) does not appear to be a claim about individuals. And therefore it is clear what (a) means: The set of kings is not a subset of the set of bald people.
- Russell’s analysis: Sometimes quantification allows “denoting”

“By a ‘denoting phrase’ I mean a phrase such as any one of the following: a man, some man, any man, every man, all men, the present King of England, the presenting King of France, the center of mass of the solar system at the first instant of the twentieth century, the revolution of the earth round the sun, the revolution of the sun round the earth. Thus a phrase is denoting solely in virtue of its form. We may distinguish three cases: (1) A phrase may be denoting, and yet not denote anything; e.g., ‘the present King of France’. (2) A phrase may denote one definite object; e.g., ‘the present King of England’ denotes a certain man. (3) A phrase may denote ambiguously; e.g. ‘a man’ denotes not many men, but an ambiguous man. The interpretation of such phrases is a matter of considerable difficulty; indeed, it is very hard to frame any theory not susceptible of formal refutation. All the difficulties with which I am acquainted are met, so far as I can discover, by the theory which I am about to explain.”

Bertrand Russell
“On Denoting” (Beginning)

- The King of France is bald.
 $\exists x[\text{KoF}(x) \wedge \forall y[\text{KoF}(y) \rightarrow x = y] \wedge \text{bald}(x)]$
- $\exists x[\text{KoF}(x) \quad \wedge \quad \forall y[\text{KoF}(y) \rightarrow x = y] \quad \wedge \quad \text{bald}(x) \quad]$

Existence	\wedge	Uniqueness	\wedge	Asserted Property
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 - * **Existence:** An entity x having the property of being a present King of France exists.
 - * **Uniqueness:** Any entity y having the property of being a present King of France is x (x is the ONLY present king of france, pretenders beware!)
 - * **Asserted Property** x is bald.
- Russell's analysis naturally deals with the problem of negation

Internal Negation

The present King of France isn't bald.

$$\exists x[\text{KoF}(x) \quad \wedge \quad \forall y[\text{KoF}(y) \rightarrow x = y] \quad \wedge \quad \neg \text{bald}(x) \quad]$$

Existence	\wedge	Uniqueness	\wedge	Negated Property
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So now we know what it means. It just happens that the claim it makes is false, because there is no present king of France (the first conjunct is false and therefore the entire conjunction is).

- Russell actually claims (3a) also has the following reading:

External Negation

The present King of France isn't bald.

$$\neg \exists x[\text{KoF}(x) \quad \wedge \quad \forall y[\text{KoF}(y) \rightarrow x = y] \quad \wedge \quad \text{bald}(x) \quad]$$

Existence	\wedge	Uniqueness	\wedge	Asserted Property
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Note that this reading is **true!** Does (3a) have an external negation reading?

- (5) a. No, brothers and sisters, the present king of France is NOT bald. In fact, brothers and sisters, there is no present king of france.
- b. # There is a present king of France, brothers and sisters. In fact, brothers and sisters, the present king of France does not exist.

- Context and definiteness I

(6) The dog got locked out last night.

$\exists x[\text{dog}(x) \wedge \forall y[\text{dog}(y) \rightarrow x = y] \wedge \text{locked-out}(x)]$
Entails there is just one dog in the world

A contextually determined unspoken property P (the P dog; i.e., ours)

$\exists x[\text{dog}(x) \wedge P(x) \wedge \forall y[[\text{dog}(y) \wedge P(x)] \rightarrow x = y] \wedge \text{locked-out}(x)]$
Entails there is just one dog that is also P (ours) in the world

The text calls such a definite description, where part of the description is unexpressed but implicit in context, an *incomplete* description

- Is Russell right? Is the internal negation reading of (3a) false? Strawson, in particular, disagrees (P.F. Strawson. (1950). “On Referring”):
 - Referring to an entity is not the same as making an assertion of its existence [the contrast between (5a) and (5b)]
 - Statements are utterances of sentences on an occasion of use. Statements are true or false, not sentences.
 - When a referring expression in an utterance fails to refer, then the utterance fails to make a statement.
 - Thus, the utterance is NEITHER true NOR false. Rather it fails to make a statement because a **presupposition** of making a statement has failed.
- Donnellan (1966) “Reference and Definite Descriptions” They’re both right (Russell and Strawson). Context matters.
 - (7) a. Smith’s murderer is insane.
 - b. **Referential Use**: Reporter sees defendant outside courtroom talking to himself. Meaning: The man I see talking to himself (whom I believe to be Smith’s murderer) is insane. Donnellan’s claim: We don’t say the reporter’s claim is false if the defendant turns out to be innocent (but insane).
 - c. **Attributive Use**: Investigator looking at horribly mutilated body of Smith. Meaning: Whoever murdered Smith must be insane. Donnellan’s claim: The investigator’s claim actually is false if it turns out that Smith’s death is due to an unlikely accident.

For referential uses Strawson's analysis is closer to right, but failure to refer is at least a lot rarer than Strawson thinks. For attributive uses Russell's analysis is closer to right.

- References:
 - Russell, Bertrand, "On Denoting," in *Mind* 14 (1905): 479-493.
 - Strawson, P. F., "On Referring," in *Mind* 59 (1950): 320-344.
 - Donnellan, Keith, "Reference and Definite Descriptions," in *Philosophical Review* 75 (1966): 281-304.

2 The as a Generalized Quantifier

- Our analysis: *The* is a generalized quantifier.
- This is like Russell's analysis. But consider plurals, which Russell didn't (he had enough on his plate)
 - (8) a. Bob bought some sheep and cows at the sale.
 - b. Sally vaccinated the sheep
 - c. Entailment: Sally vaccinated ALL the sheep bought at the sale.
- Sally vaccinated the sheep.
 - (9) $\{x \mid \text{sheep}(x)\} \subseteq \{y \mid \text{vaccinate}(\text{Sally}, y)\} \wedge |\{x \mid \text{sheep}(x)\}| \geq 2$
 - (10) a. Bob bought a sheep and a cow at the sale.
 - b. Sally vaccinated the sheep
 - c. Entailment: Sally vaccinated the unique sheep bought at the sale.
- Sally vaccinated the sheep.
 - (11) $\{x \mid \text{sheep}(x)\} \subseteq \{y \mid \text{vaccinate}(\text{Sally}, y)\} \wedge |\{x \mid \text{sheep}(x)\}| \geq 1$

Note: For singular definites our analysis has the same truth conditions as Russell's analysis. So for singular indefinites, it IS Russell's analysis, despite the changed notation.

3 Context and Definiteness II; Familiarity, A Generalized version of anaphora

- (12) a. An old man_i came down the road leading a donkey_j. *It_j* carried a large brown sack_k on its_j back and every now and then *he_i* adjusted *it_k* more securely.
- b. An old man_i came down the road leading a donkey_j. *The donkey_j* carried a large brown sack_k on its_j back and every now and then *the old man_i* adjusted *the sack_k* more securely.

- Is this a problem for our neo-Russellian analysis? Not directly. We treat these all just be treated as incomplete descriptions

Restored complete descriptions

- (13) An old man_i came down the road leading a donkey_j. *The donkey [the old man was leading]_j* carried a large brown sack_k on its_j back and every now and then *the old man [leading the donkey]_i* adjusted *the sack [the donkey was carrying on its back]_k* more securely.

But does this work completely? Note our restored definite descriptions still have incomplete descriptions inside them (in angle brackets)

- (14) An old man_i came down the road leading a donkey_j. *The donkey [⟨the old man⟩ was leading]_j* carried a large brown sack_k on its_j back and every now and then *the old man [leading ⟨the donkey⟩]_i* adjusted *the sack [⟨the donkey⟩ was carrying on its back]_k* more securely.

Point: In practice it's quite tricky to define precisely what the complete description is in context.

- Another pronoun-like property: “Bound” Definites

‘Bound’ Pronouns:

- (15) a. Every man_x thinks he_x's a genius.
 b. $\forall x[\text{man}(x) \rightarrow \text{think}(x, \text{genius}(x))]$

“Bound” Definites:

(16) Every little leaguer_x's father thinks the boy_x's a genius.

4 Scope and Opaque Contexts

- Leibniz's Law (from Lecture I : Substitutivity of Identicals)[the (c) sentences follow from the (a) and (b) sentences]

(17) a. Mohammed Ali = Cassius Clay
b. Mohammed Ali was a boxer.
c. Cassius Clay was a boxer

(18) a. the director of *Eraserhead* = the director of *Blue Velvet*
b. The director of *Eraserhead* is tall.
c. The director of *Blue Velvet* is tall.

- Failures of Leibniz's Law in Modal Contexts [the (c) sentences do not follow from the (a) and (b) sentences]

(19) a. Yuri Gagarin = the first man in space
b. Yuri Gagarin might not have been the first man in space.
[Alan Shephard might have beaten him up there.]
c. Yuri Gagarin might not have been Yuri Gagarin. [?]

(20) a. the number of the planets = nine
b. Necessarily nine is nine.
c. Necessarily the number of the planets is nine.

- Contexts in which Leibniz's Law can fail are called **Opaque Contexts**
- Failures of Leibniz's Law with propositional attitudes Quine's case (Quine 1976) and Russell's case (Russell 1905)

There is a certain man in a brown hat whom Ralph has glimpsed several times under questionable circumstances on which we need not enter here; suffice it to say that Ralph suspects he is a spy. Also, there is a gray-haired man, vaguely known to Ralph as a pillar of the community, whom Ralph is not aware of having seen except once at the beach [but whose

name Ralph knows to Bernard J. Ortcutt]. Now Ralph does not know it, but the men are one and the same.

- (21) a. Bernard J. Ortcutt = the man seen at the beach = the man in the brown hat
 b. Ralph believes that Ortcutt is a spy. [false]
 c. Ralph believes that the man in the brown hat is a spy.[true]
 d. Ralph believes that the man seen at the beach is a spy.[false]

Russell's example:

- (22) a. the author of *Waverley* is Sir Walter Scott.
 b. King George IV wondered whether the author of *Waverley* was Sir Walter Scott.
 c. King George IV wondered whether Sir Walter Scott was Sir Walter Scott.
- (23) Oedipus wanted to marry his mother. [true or false given Sophocles's plot?]

- These examples are all arguments for a quantificational analysis of definite descriptions

- Gegearin: Natural reading

Yuri Gegearin might not have been the first man in space
 $\diamond \text{The } x [\text{first man in space}(x)] \neg g = x$

- Another, silly reading

Yuri Gegearin might not have been the first man in space
 $\text{The } x [\text{first man in space}(x)] \diamond \neg g = x$

- *de dicto* reading with a propositional attitude: Description falls under the scope of the attitude predicate.

- (24) a. Ralph believes the man in the brown hat is a spy.
 b. believe(r, The x [man in brown hat(x)]spy(x))
 c. Ralph believes the man on the beach is a spy.
 d. believe(r, The x [man on beach(x)]spy(x))

- (25) a. Oedipus wanted to marry his mother. [de dicto reading is false in play; Oedipus wants to marry Jocasta, who is his mother, but he doesn't know it!]
 b. $\text{want}(o, \text{The } x [\text{mother-of}(x, o)] \text{ marry}(o, x))$

– de re reading: description takes wide scope with respect to the attitude predicate

- (26) a. Oedipus wanted to marry his mother. [true in play]
 b. $\text{The } x [\text{mother-of}(x, o)] \text{ want}(o, \text{marry}(o, x))$

- But since similar examples occur with proper names, these examples are also arguments for a quantificational analysis of proper names

Ancient names for the evening star and the morning star (=Venus): Hesperus and Phosphorus respectively. (Frege's examples)

- (27) a. Hesperus = Phosphorus
 b. The ancients knew that Hesperus was Hesperus. [True]
 c. The ancients knew that Hesperus was Phosphorus. [False]

- References

- Quine, W. V. O. (1956). "Quantifiers and Propositional Attitudes". *Journal of Philosophy* 53. Reprinted in Quine, W.V. O. (1956). *The Ways of Paradox and Other Essays* Cambridge, MA. Harvard University Press. 185-96.
- Frege, G. (1970). "On Sense and Reference" In P. Geach and M. Black, editors, *Translations from the Philosophical Writings of Gottlob Frege*. pp 56-78. Blackwell, Oxford, 1970. Originally published in 1892.