Russell

Principles of Mathematics
RUSSELL'S THEORY OF PROPOSITIONS

Propositions are mind- and language-independent complexes made up of entities and universals. They play the following roles:

(a) They are the things that are either true or false.
(b) They are the contents of declarative sentences.
(c) They are the things we believe.
Sentences vs. Propositions

Propositions are the contents of (declarative) sentences:

‘Allen is bald.’

\[ \text{HAS THE FORM} \]

\[ \text{Ba} \]

\[ \text{MEANS} \]

\[ <\text{BALDNESS, Allen}> \]

THE PROPERTY

THE PERSON
WHY BELIEVE IN PROPOSITIONS?

• Beliefs can share contents. Frege and Russell both believed that mathematics was reducible to logic.

• Two sentences can have the same meaning. ‘Eppur si muove’ means ‘Still it moves’.

• Some sentences aren’t true or false on their own, but can be used to say things that are true or false. E.g. ‘I am here now.’
MATCHING SENTENCES TO MEANINGS

How can we tell what proposition a (declarative) sentence has as its meaning?

Two steps:

1. Identify the sentence’s logical form. (As we’ll see, this part may involve analysis.)

2. Match each part of the sentence to the thing it stands for.
‘Allen is bald.’

HAS THE FORM

Ba

MEANS

<BALDNESSNESS, Allen>

THE PROPERTY

THE PERSON
PUZZLE #1: DENOTING PHRASES

‘Every dog barks.’

Determiner
Noun (Phrase)

‘A subway breakdancer kicked me in the face.’

‘The man who discovered the theory of descriptions barks.’
DENOTING

“A concept denotes when, if it occurs in a proposition, the proposition is not about the concept, but about a term connected with the concept. If I say “I met a man”, the proposition is not about a man: this is a concept which does not walk the streets, but lives in the shadowy limbo of the logic-books. What I met was a thing, not a concept, an actual man with a tailor and a bank-account or a public-house and a drunken wife.”

—Russell, Principles of Mathematics, §56
“Again, the proposition “any finite number is odd or even” is plainly true; yet the concept “any finite number” is neither odd nor even. It is only particular numbers that are odd or even; there is not, in addition to these, another entity, any number, which is either odd or even, and if there were, it is plain that it could not be odd and could not be even.”

Denoting phrases seem to be about things, but they don’t have any parts that stand for those things.

E.g., we use ‘every dog’ to talk about dogs, not properties.

But to do so, we use words that stand for properties.
PUZZLE #1: DENOTING PHRASES

‘Every dog barks.’

HAS THE FORM

<????, Barks, ???>

MEANS

THE PROPERTY
A definite description is any phrase made up of a definite article followed by a noun phrase:

\[
\text{the tallest mountain on earth}
\]

(This is a kind of denoting phrase, by Russell’s definition.)
PUZZLE #2: DEFINITE DESCRIPTIONS

Definite descriptions seem to stand for particular things, just like proper names.

Obama smokes. = So
The US president in 2015 smokes. = Sp?

But this idea leads to problems...
Sentences containing descriptions that don’t describe anything seem to be perfectly meaningful. Indeed, they’re false:

Dan met the present king of France.

But France doesn’t have a king. So what is the false proposition expressed by this sentence?
This is true:

The present king of France does not exist.

But if definite descriptions stand for things, then translating this into FOL makes it false:

\[ \neg E_k \]
\[ \neg (\exists x)(x = k) \]
If descriptions’ meanings are the things they stand for, then these two sentences express the same proposition:

(1) The tallest building in NYC is 1776ft tall.
(2) The most expensive building in NYC is 1776ft tall.

But someone could believe (1) without believing (2) (for example, if they think that the Empire State Building is more expensive than the Freedom Tower).
PUZZLE #2.3: SUBSTITUTION PUZZLES

If descriptions’ meanings are the things they describe, then we should be able to substitute co-referring descriptions in sentences without changing them from true to false. But that’s not right:

(1) Jones believes that the tallest building in NYC is 1776ft tall.
(2) Jones believes that the most expensive building in NYC is 1776ft tall.

(Jones mistakenly believes that they call it The Freedom Tower because it didn’t cost anything.)
PUZZLES

All of these puzzles can be summed up as follows: denoting phrases (and particularly definite descriptions) may seem to stand for things, but they don’t act like it.
“The Modern era, as analytic philosophers reckon, started with Descartes. Recent philosophy, by contrast, the Recent era started when philosophers took the “linguistic turn” (Richard Rorty’s phrase), hence with Frege or Russell, or early Wittgenstein, or the Vienna Circle—take your pick. Modern philosophy was mostly about epistemology; it wanted to understand what makes knowledge possible. Recent philosophy is mostly about meaning (or “content”) and wants to understand what makes thought and language possible. So, anyhow, we tell our undergraduates when we’re in a hurry.”

—Jerry Fodor, 1995
ROLES FOR PROPOSITIONS
- Propositions are the contents of beliefs.
- Propositions are the meanings of (declarative) sentences.
- Propositions are the things we communicate.
- Propositions are the things that are true or false. A sentence is true (false) iff its meaning is true (false). A belief is true (false) iff its content is true (false).

PROPOSITIONAL STRUCTURE
- The logical form of a sentence and the structure of the proposition that is its meaning are isomorphic.
- The meaning of each meaningful part of a sentence is the corresponding component of the proposition the sentence expresses.

RUSSELL’S STARTING HYPOTHESIS
- The meaning of a sentence part is the entity or universal that it seems to be about (refer to/stand for/denote).

THE PROBLEM
- These assumptions are in tension when it comes to denoting phrases, and seem clearly inconsistent when it comes to definite descriptions.
RUSSELL'S 1902 SOLUTION

Whereas proper names stand for things directly, denoting phrases stand for things only indirectly, via denoting concepts.

Denoting phrases contribute these denoting concepts to propositions.
‘Every dog barks.’

\[ \Sigma(B) \]

Means

\[ <\text{EVERY-DOG, BARKING}> \]

The denoting concept that denotes dogs in the everyish way

The property of being something that barks
‘The dog barks.’

*HAS THE FORM*

\[ \Theta(B) \]

*MEANS*

\[ \langle \text{THE-DOG, BARKING} \rangle \]

**THE DENOTING CONCEPT THAT DENOTES DOGS IN THE THEISH WAY**

**THE PROPERTY OF BEING SOMETHING THAT BARKS**
Co-referring and non-referring definite descriptions don’t have referents as their contents anymore. They have denoting concepts instead.

Non-referring denoting descriptions have non-denoting concepts.

Co-referring descriptions can express different contents.
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↑ “Not when it comes to denoting phrases. They have denoting concepts as their meanings.” —Russell, 1902
What, exactly, is the semantic difference between ‘every dog’, ‘a dog’, ‘some dog’, ‘all dogs’, and ‘the dog’?

Russell says that they all denote the dogs, but “in different ways”.

This is vague to say the least!
PROBLEMS WITH RUSSELL' S SOLUTION

All of the problems about descriptions also apply to proper names!

So no theory of denoting phrases can solve the problems in their full generality.
Gottlob Frege
On Sense and Reference

Painting by Renée Jorgensen Bolinger
Über Sinn und Bedeutung
(‘On Sense and Reference’)
Each expression has (at least) the following two semantic properties:

- **sense** (Sinn)
- **reference** (Bedeutung)

*(Frege also mentions a third kind in passing: **coloring** (Färbung).*
"It is natural, now, to think of there being connected with a sign (name, combination of words, letter), besides that to which the sign refers, which may be called the reference of the sign, also what I should like to call the sense of the sign, wherein the mode of presentation is contained."
Frege’s Puzzle:

Compare:

(1) Hesperus is identical to Hesperus.
(2) Hesperus is identical to Phosphorus.

and:

(3) The morning star is identical to the morning star.
(4) The morning star is identical to the evening star.
Frege’s Puzzle (in general):

Identity statements of the form ‘a=a’ are trivial, but those of the form ‘a=b’ are nontrivial. We have to believe the first kind but not the second kind. They differ in cognitive value.

If the meaning of a proper name or a description is just its referent, we can’t explain this.
Frege’s Solution:

“If we found "a=a" and "a=b" to have different cognitive values, the explanation is that for the purpose of knowledge, the sense of the sentence, viz., the thought expressed by it, is no less relevant than its referent, i.e., its truth value. If now a=b, then indeed the referent of "b" is the same as that of "a," and hence the truth value of "a=b" is the same as that of "a=a." In spite of this, the sense of "b" may differ from that of "a," and thereby the sense expressed in "a=b" differs from that of "a=a." In that case the two sentences do not have the same cognitive value.”
An expression’s sense plays several roles:

- It is a mode of presentation of the expression’s referent
- It determines the expression’s referent.
- It is the what is grasped by a speaker who understands the expression
- They are what is communicated.
- It is responsible for the expression’s "cognitive value".
- It is the referent of the expression in "indirect" (ungerade) linguistic contexts.
Frege’s Anti-Psychologism

"The reference and sense of a sign are to be distinguished from the associated idea. ... The idea is subjective: one man’s idea is not another. ... This constitutes an essential difference between the idea and the sign’s sense, which may be the common property of many and therefore is not a part of a mode of the individual mind." (8th paragraph)
Frege’s Anti-Psychologism

"By a thought I understand not the subjective performance of thinking but its objective content, which is capable of being the common property of several thinkers." (fn.7)
The Sense of a Sentence is a Thought

"By a thought I understand not the subjective performance of thinking but its objective content, which is capable of being the common property of several thinkers." (fn.7)
Thoughts and Truth-Conditions

The sense of a sentence is “the thought that its truth-conditions are fulfilled”.

(Frege, Grundgesetzte, §32)
Sense as Indirect Reference

We can normally substitute co-referring expressions without changing the reference of expressions in which they appear.

e.g.:

**Hesperus** is identical to Venus.

**Phosphorus** is identical to Venus.
Sense as Indirect Reference

Some syntactic positions are non-extensional: they don’t allow substitution of co-referring expressions.

Lucy believes that *Hesperus* is identical to Venus.

Lucy believes that *Phosphorus* is identical to Venus.
Sense as Indirect Reference

Frege’s solution to this problem is that expressions in these "oblique" (ungerade) contexts refer to their usual senses.

Lucy believes that Hesperus is identical to Venus.

Lucy believes that Phosphorus is identical to Venus.
Non-Extensional Contexts

Anything embedded under a "propositional attitude verb"

Lois believes that Superman is not Clark Kent.

Lois desires superman.

Lois said that superman is brave.

Lois went outside in order to see Superman.
Lois believe that Superman is brave.

(By the way: "embedded under" $=_{df.}$ "is C-commanded by".)
Sentences Refer to Truth Values

Why does Frege think this?
Sentences Refer to Truth Values
Why does Frege think this?

For the best explanation I’ve ever read, see Stephen Neale, Facing Facts (OUP, 2001), Ch.3, "Frege: Truth and Composition" (email me for a copy).
<table>
<thead>
<tr>
<th><strong>SIGN</strong></th>
<th><strong>NAME</strong></th>
<th><strong>PREDICATE</strong></th>
<th><strong>SENTENCE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a linguistic expression</td>
<td>‘Aristotle’</td>
<td>‘...is wise’</td>
<td>‘Aristotle is wise.’</td>
</tr>
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<table>
<thead>
<tr>
<th><strong>SENSE</strong></th>
<th><strong>(INDIVIDUAL) CONCEPT</strong></th>
<th><strong>(GENERAL) CONCEPT</strong></th>
<th><strong>THOUGHT</strong></th>
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<tbody>
<tr>
<td>the abstract object expressed by the sign</td>
<td>a mode of presentation of an individual</td>
<td>function from individual senses to thoughts</td>
<td>an entity with truth conditions that can be grasped by different people</td>
</tr>
<tr>
<td></td>
<td><em>the student of Plato and teacher of Alexander</em></td>
<td><em>the concept of wisdom</em></td>
<td><em>the thought that Aristotle is wise</em></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th><strong>REFERENCE</strong></th>
<th><strong>AN INDIVIDUAL</strong></th>
<th><strong>PROPERTY</strong></th>
<th><strong>TRUTH VALUE</strong></th>
</tr>
</thead>
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<tr>
<td>what the sign stands for or designates</td>
<td><em>Aristotle himself</em></td>
<td>function from things to truth values</td>
<td>either The True or The False</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>the function that outputs the true if you give it a wise thing and false otherwise</em></td>
<td>in this case, The True</td>
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↑ This is never true. The meaning (sense) of sentence part is a mode of presentation of the thing the expression stands for, not the thing itself.
—Frege, 1892
PROBLEMS FOR FREGE’S VIEW

Frege has solved the issue about definite descriptions and names, but what about other denoting phrases?

(Answer: Frege’s solution is actually the same as Russell’s 1905 solution to that problem. He shows that they disappear at logical form. We’ll get to that soon.)
A MUCH MORE SERIOUS PROBLEM

Frege’s theory seems to be incompatible with two of our initial assumptions:

• Propositions are the contents of beliefs.
• Propositions are the things we communicate.

If propositions are made up of individual modes of presentation on objects, then how can two people ever entertain the same proposition?

After all: the same object is presented to each of us in a different way.

So how can two people ever think the same thing?
On Denoting (1905)
“I would give the doctrine of [the word ‘the’] if I were ‘dead from the waist down’ and not merely in prison.”

—Russell, *Introduction to Mathematical Philosophy* (written while in prison for dissing WW1, published 1919)
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THE PROBLEM

In using a sentence like ‘Russell protests’, what we seem to be doing is referring to Russell and saying of him that he protests.

But then what are we doing when we use superficially similar like these?

- Everyone protests.
- Someone protests.
- The present king of France protests.
- Homer Simpson protests.
- Homer Simpson doesn’t exist.
TWO POSSIBLE SOLUTIONS

Frege: The meaning (propositional contribution) of an expression is its sense, not its referent.

Alexis Meinong: Any object we can talk about (including fictional characters and impossible objects) exist, just not in the same way as regular, actual things.
RUSSELL’S 1905 SOLUTION

There is actually no tension in all of those doctrines.

We just haven’t put enough effort into understanding sentences’ real logical forms.

We need more analysis!
AN INFLUENTIAL IDEA: SURFACE FORM VS. LOGICAL FORM

• The surface structure of a sentence may mislead us as to its underlying “logical form”.

• The structure relevant to meaning is logical form, not surface form.

• Part of the job of a philosopher of language is to discover the underlying logical forms of sentences.

• This is not only required to do semantics, it can help dispel other philosophical confusions.
THE THEORY OF DESCRIPTIONS

A sentence whose surface form is:

the F is G

has the following logical form:

(∃x)((Fx & (∀y)(Fy ⊃ y=x)) & Gx)

which can be paraphrased as:

There exists an x which is both F and G, and any y that is F is identical to x.

or, more naturally:

There exists a unique F that is G.
“I take the notion of the variable as fundamental; I use ‘C(x)’ to mean a proposition* in which x is a constituent, where x, the variable, is essentially and wholly undetermined.”

*More exactly, a propositional function.
In a quantified sentence like this:

\[(\exists x)Fx\]

the meaning of this embedded formula is a propositional function:

\[Fx\]

A propositional function is like a proposition, but with a place-holder where an entity would normally go. It turns into an proposition when a value is specified for the variables in it (in this case, for ‘x’).
"Then we can consider the two notions ‘$C(x)$ is always true’ and ‘$C(x)$ is sometimes true’. Then everything and nothing and something (which are the most primitive denoting phrases) are to be interpreted as follows:

$C$\{everything\} means ‘$C(x)$ is always true’;

$C$\{nothing\} means ‘“$C(x)$ is false” is always true’;

$C$\{something\} means ‘It is false that “$C(x)$ is false” is always true.’

Here the notion ‘$C(x)$ is always false’ is taken as primitive and indefinable, and the others are defined by means of it.

*The second of these can be defined by means of the first, if we take it to mean, ‘It is not true that “$C(x)$ is false” is always true’

† I shall sometimes use, instead of this complicated phrase, the phrase ‘$C(x)$ is not always false’, or ‘$C(x)$ is sometimes true’...
The meanings of the quantifiers are properties of propositional functions.

The meaning of ‘(∃x)’ is the property of being a propositional function that is true for at least one value of x.

(Or, as Russell confusingly puts it, it is the property of being a propositional function that is “not always false”.)

The meaning of ‘(∀x)’ is the property of being a propositional function that is true for every value of x.

(Or, the property of being a propositional function that is “always true”.)
It is sometimes said that the thesis of ‘On Denoting’ is that there are no denoting phrases. What’s meant by this is that so-called denoting phrases are an illusion of surface grammar. They are no longer parts of sentences once the logical form is revealed.

A man smokes $\rightarrow (\exists x)(Mx \land Sx)$
Every man smokes $\rightarrow (\forall x)(Mx \supset Sx)$
The same goes for descriptions. When we translate ‘the F is G’ into logical form, there is no single word or phrase that translates ‘the F’:

‘The F is G’

\((\exists x)((Fx \& (\forall y)(Fy \supset y=x)) \& Gx)\)
DEFINITE DESCRIPTIONS

“Thus, ‘the father of Charles II was executed’ becomes:
‘It is not always false of $x$ that $x$ begat Charles II and that $x$ was executed and that “if $y$ begat Charles II, $y$ is identical to $x$” is always true of $y.”’

IN LOGICAL NOTATION:

$$\neg(\forall x)\neg(Bxc \land Ex \land ((\forall y)(Byc \supset y=x)))$$

Or (since ‘$\neg(\forall x)\neg$’ can always be substituted for ‘$(\exists x)$’):

$$(\exists x)(Bxc \land Ex \land ((\forall y)(Byc \supset y=x)))$$

$Bxy = ‘x begat y’$  $Ex = ‘x was executed’$  $c = Charles$
PUZZLE #1: DENOTING PHRASES

‘Every dog barks.’

\[(\forall x)(Bx)\]

\(<\text{EVERY}, \text{BARKS}(x)\>\)

THE PROPERTY A PROPOSITIONAL FUNCTION HAS IF IT IS TRUE OF EVERYTHING

THE PROPOSITIONAL FUNCTION THAT IS TRUE OF SOMETHING IFF IT BARKS
PUZZLE #2.1: EMPTY DESCRIPTIONS

Sentences containing descriptions that don’t describe anything seem to be perfectly meaningful. Indeed, they’re false:

Dan met **the present king of France**.

But France doesn’t have a king. So what is the false proposition expressed by this sentence?
Russell’s solution: analyze away the description

Dan met the present king of France.

(∃x)(Kx ∧ Mdx ∧ ((∀y)(Ky ⊃ y=x)))

There is a present king of France who Dan met, and there is at most one present king of France.
This is true:

The present king of France does not exist.

But if definite descriptions stand for things, then translating this into FOL makes it false:

$$\neg \exists k (x = k)$$
Russell’s solution again involves finding the right logical form:

The present king of France does not exist.

\neg (\exists x)(Kx \land (\forall y)(Ky \supset y=x))

(It is not the case that there exists at least one and at most one present king of France.)
If descriptions’ meanings are the things they stand for, then these two sentences express the same proposition:

(1) The tallest building in NYC is 1776ft tall.
(2) The most expensive building in NYC is 1776ft tall.

But someone could believe (1) without believing (2) (for example, if they think that the Empire State Building is more expensive than the Freedom Tower).
Russell’s solution is that these two descriptions have different meanings.

(1) The tallest building in NYC is 1776ft tall.

\[(\exists x)(((Bx \land (\forall y)((By \land y \neq x) \supset Txy)) \land 1776x)\]

(2) The most expensive building in NYC is 1776ft tall.

\[(\exists x)(((Bx \land (\forall y)((By \land y \neq x) \supset Exy)) \land 1776x)\]

Russell’s theory predicts that (1) and (2) express different propositions. So we can believe one but not the other.
Russell on Descriptions, Summary

Russell thinks that these three sentences have the same meanings and that the second captures the logical form of the first.

The F is G

$(\exists x)((Fx \& (\forall y)(Fy \supset y=x)) \& Gx)$

There is at least one F, there is at most one F, and every F is G.
Frege pointed out that the puzzles about definite descriptions also apply to proper names.

Russell’s solution is to conclude that most proper names are actually disguised definite descriptions.

If this is true, then Russell’s solution works for names, too.
“Thus when, for example, we make a statement about Julius Caesar, it is plain that Julius Caesar himself is not before our minds, since we are not acquainted with him. We have in mind some description of Julius Caesar: 'the man who was assassinated on the Ides of March', 'the founder of the Roman Empire', or, merely 'the man whose name was Julius Caesar'. ... Thus our statement does not mean quite what it seems to mean, but means something involving, instead of Julius Caesar, some description of him which is composed wholly of particulars and universals with which we are acquainted.”

*The Problems of Philosophy*, ch.5
“Every proposition which we can understand must be composed wholly of constituents with which we are acquainted.”

The Problems of Philosophy, ch.5
ACQUAINTANCE

“We shall say that we have acquaintance with anything of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths. Thus in the presence of my table I am acquainted with the sense-data that make up the appearance of my table—its colour, shape, hardness, smoothness, etc.; all these are things of which I am immediately conscious when I am seeing and touching my table.”

The Problems of Philosophy, ch.5
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**RUSSELL’S STARTING HYPOTHESIS**

- The meaning of a sentence part is the entity or universal that it seems to be about (refer to/stand for/denote). *(R. gets to keep this hypothesis!)*

**THE PROBLEM**

- These assumptions are in tension when it comes to denoting phrases, and seem clearly inconsistent when it comes to definite descriptions.
analyze (Brit. analyse)

/'anlˌɪz/
verb

examine methodically and in detail the constitution or structure of (something, especially information), typically for purposes of explanation and interpretation.

Source: OS X Dictionary
Russellian Analysis

Philosophical analysis consists of discovering the true structure (logical form) of the propositions which are expressed by our sentences and which are the contents of our beliefs.
Analysis serves several philosophical purposes:

1. It solves logical puzzles.
   (e.g., Russell’s puzzles in ‘On Denoting’)

2. In epistemology, it tells us how our mind can make cognitive contact with the outside world.
   (We analyze every proposition into one whose components we’re acquainted with.)

3. In metaphysics, it tells us what kinds of things exist in the world.
   (After we finish analyzing, what’s left over is what exists, or what exists fundamentally.)
SOME DISCUSSION QUESTIONS:

1. How good is the theory of descriptions as an empirical theory of the words ‘the’ and ‘a’?

2. How good is descriptivism as an empirical theory of proper names?

3. How good is the theory of descriptions as a tool in foundational epistemology?

4. How good is the theory of descriptions as a tool in ontology?
1. How good is the theory of descriptions as an empirical theory of the words ‘the’ and ‘a’?
Some sentences containing non-denoting descriptions seem not to be true or false.

“The person in this room who is over seven feet tall is from Queens.”

Frege seems to predict these data better than Russell.

Key sources on this argument:
P.F. Strawson (1950): ‘On Referring’
RUSSELL’S BAD PREDICTIONS

Reply: Russell makes many predictions that are better than Frege’s.

“Daniel Harris has met the person in this room who is over seven feet tall.”

It looks like a tossup.

(Many philosophers and linguists have argued that we can explain away one set of intuitions or the other.)
INCOMPLETE DESCRIPTIONS

We often use descriptions that don’t pick anything out uniquely.

The marker is on the table.

Russell predicts that all such descriptions are false, but this seems wrong.
MISDESCRIPTION

We can talk about someone using an inaccurate description:

The man in the corner drinking martini is rich.
(Said of a man who’s actually drinking water from a martini glass)

The Kenyan in the White House wants to raise my my taxes.
(Said by a racist conspiracy theorist about Obama.)

Russell’s theory predicts that these sentences are about whoever fits the description.

Key source: Keith Donnellan (1966): ‘Reference and Definite Descriptions’
Influential reply: distinguish what a sentence literally says from what the speaker communicates with it. When we use an incomplete description or a misdescription, the sentence literally says one thing, but the speaker says something else.

Saul Kripke (1977): ‘Speaker Reference and Semantic Reference’
Stephen Neale (1990): Descriptions
OTHER SINGULAR USES OF ‘THE’

Sometimes we use definite descriptions to say things about a type of thing, or a role played by many things:

The whale is a mammal.
The United States president has been assassinated four times.
2. How good is descriptivism as an empirical theory of proper names?
THE EPISTEMIC ARGUMENT

I can refer to someone with a name even if I don’t know enough about them to describe them uniquely:

Richard Feynman was a physicist.

Who is Manny Pacquiao? (I only know that he’s a boxer.)

See: Saul Kripke (1972): Naming and Necessity
THE SEMANTIC ARGUMENT

I can use someone’s name to refer to them even if I am wildly misinformed about them.

See: Saul Kripke (1972): Naming and Necessity
THE MODAL ARGUMENT

When talking about other possible worlds, names and descriptions work differently.

If things had been different, Obama might not have been the president.

If things had been different, Obama might not have been Obama.

See: Saul Kripke (1972): *Naming and Necessity*
It looks like names can be used in a lot of non-referring ways:

Every Rick I’ve ever met has been a jerk.

There are lots of Doug’s in Canada.

Some philosophers have argued that bare names are just like these, but with a silent ‘the’ at logical form.

See: Delia Graff Fara (2015): ‘Names are Predicates’
3. How good is the theory of descriptions as a tool in foundational epistemology?
4. How good is the theory of descriptions as a tool in ontology?