

# Philosophical Logic

LECTURE EIGHT | MICHAELMAS 2017

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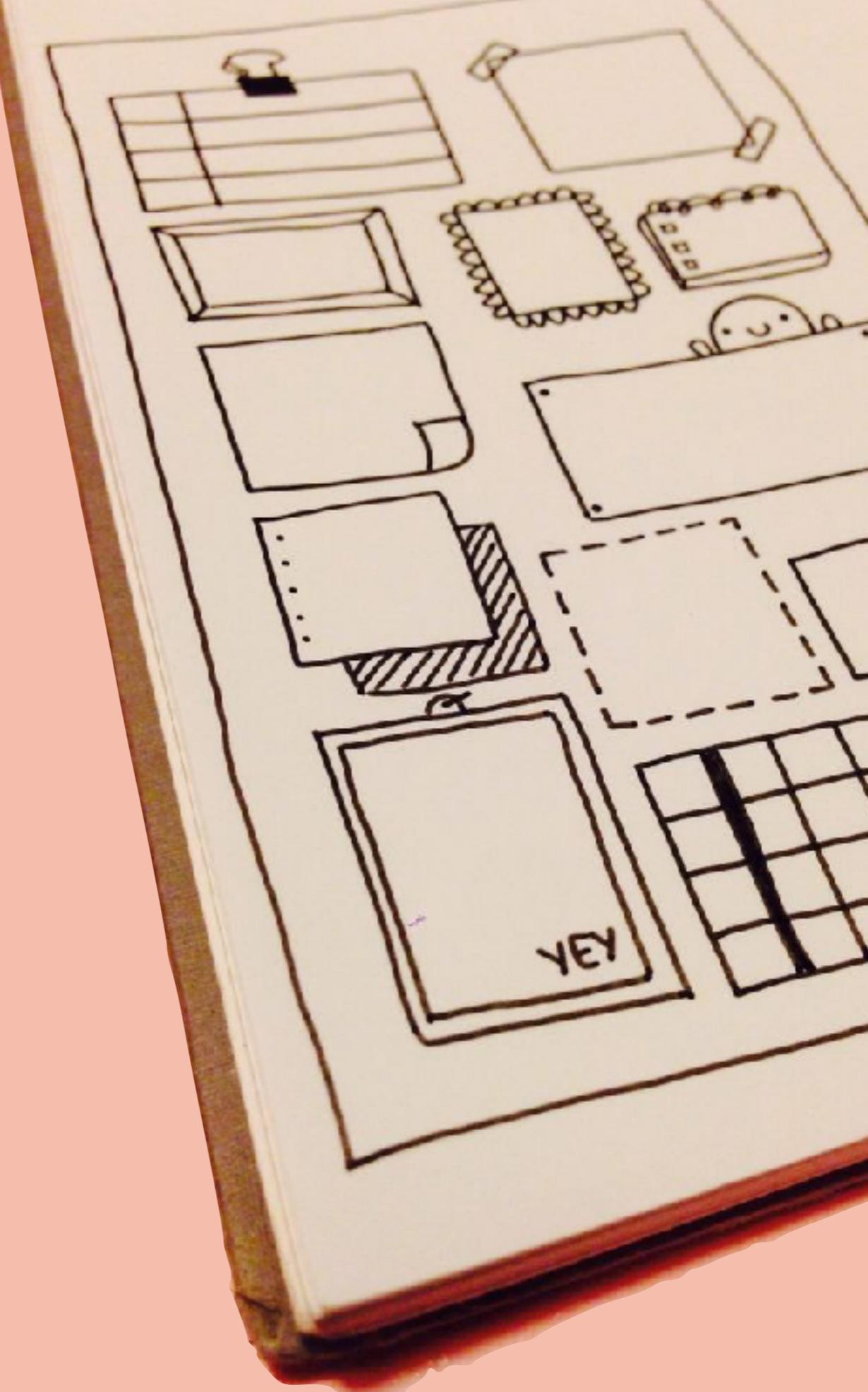


# Last week

- Lecture 1: **Necessity, Analyticity, and the A Priori**
- Lecture 2: **Reference, Description, and Rigid Designation**
- Lecture 3: **What Could ‘Meaning’ Mean?**
- Lecture 4: **Natural Language**
- Lecture 5: **Formal Translations**
- Lecture 6: **Conditionals**
- Lecture 7: **Deeper into ‘the’**
- Lecture 8: **Quantification and Existence**

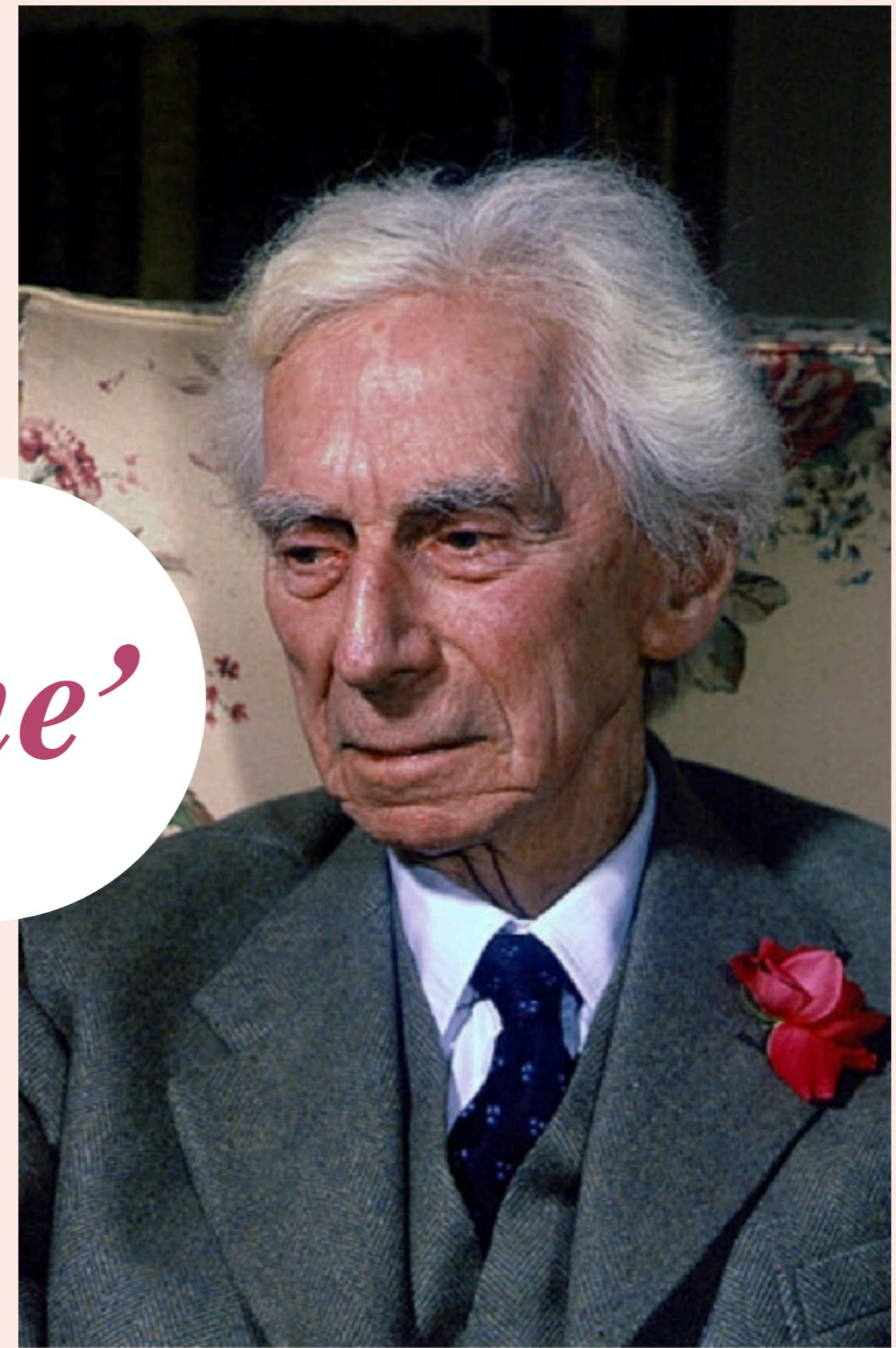
# Today

1. Descriptions and presupposition
2. Attributive and referential uses of descriptions
3. Ontological commitment
4. Objectual and substitutional quantification



# Definite description and presupposition

‘the’

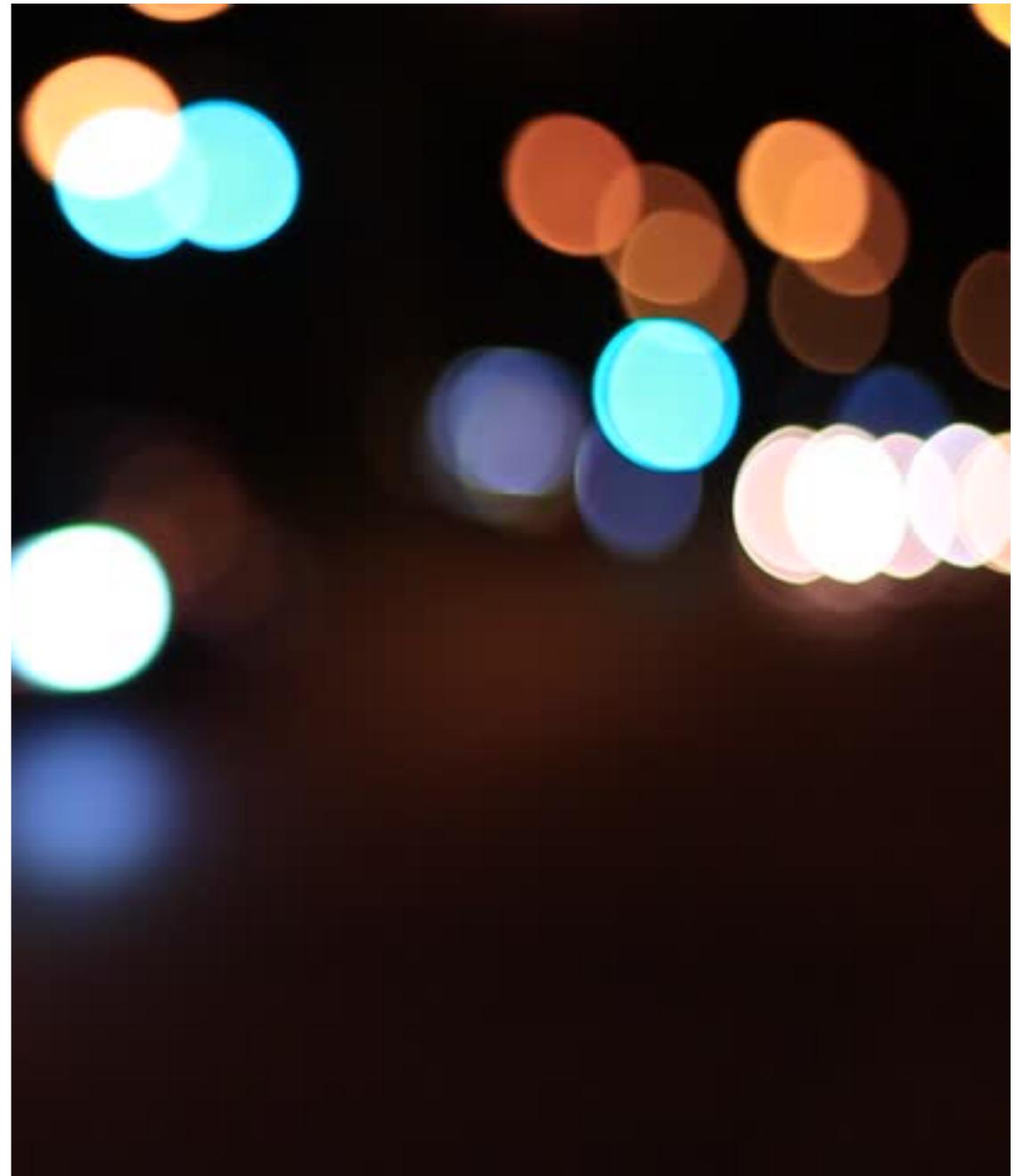


# Definite descriptions

*'The philosopher thought hard'*

- Recall, Russell thinks that ‘the philosopher’ in the above sentence is not a referring expression, but a denoting phrase
- When you utter the sentence you don’t refer to a philosopher, but use a **definite description** to pick out whatever object satisfies the description ‘...is a philosopher and thought hard’

$$\exists x (Px \wedge \forall y (Py \rightarrow y = x) \wedge Tx)$$



A portrait painting of Bertrand Russell, an elderly man with white hair, wearing a striped jacket over a light-colored shirt.

# Reference and use

1. '*The philosopher thought hard*'
  2. '*The present King of France is bald*'
- P.F. Strawson objects to Russell's theory: intuitively the 2nd sentence isn't true or false; it lacks a truth value (it has a 'truth value gap')
  - Russell and Strawson have different intuitions here
  - If Strawson is right, then it suggests that 'The present King of France' is used referentially. When we utter the sentence, we use that phrase to refer to someone, but fail to do so
  - What Russell gets wrong, according to Strawson, is that reference is not part of the *meaning* of a sentence, but a feature of its *use*

# Reference and use

But one of the conventional functions of the definite article is to act as a *signal* that a unique reference is being made —a signal, not a disguised assertion. When we begin a sentence with “the such-and-such” the use of “the” shows, but does not state, that we are, or intend to be, referring to one particular individual of the species “such-and-such”. *Which* particular individual is a matter to be determined from context, time, place and any other features of the situation of utterance.

P.F. Strawson, ‘On Referring’ 1950: 331-332

- Strawson thinks that any utterance of ‘The present King of France is bald’ involves a *presupposition* about there being someone you’re talking about (*that guy, you know, the present King of France*).

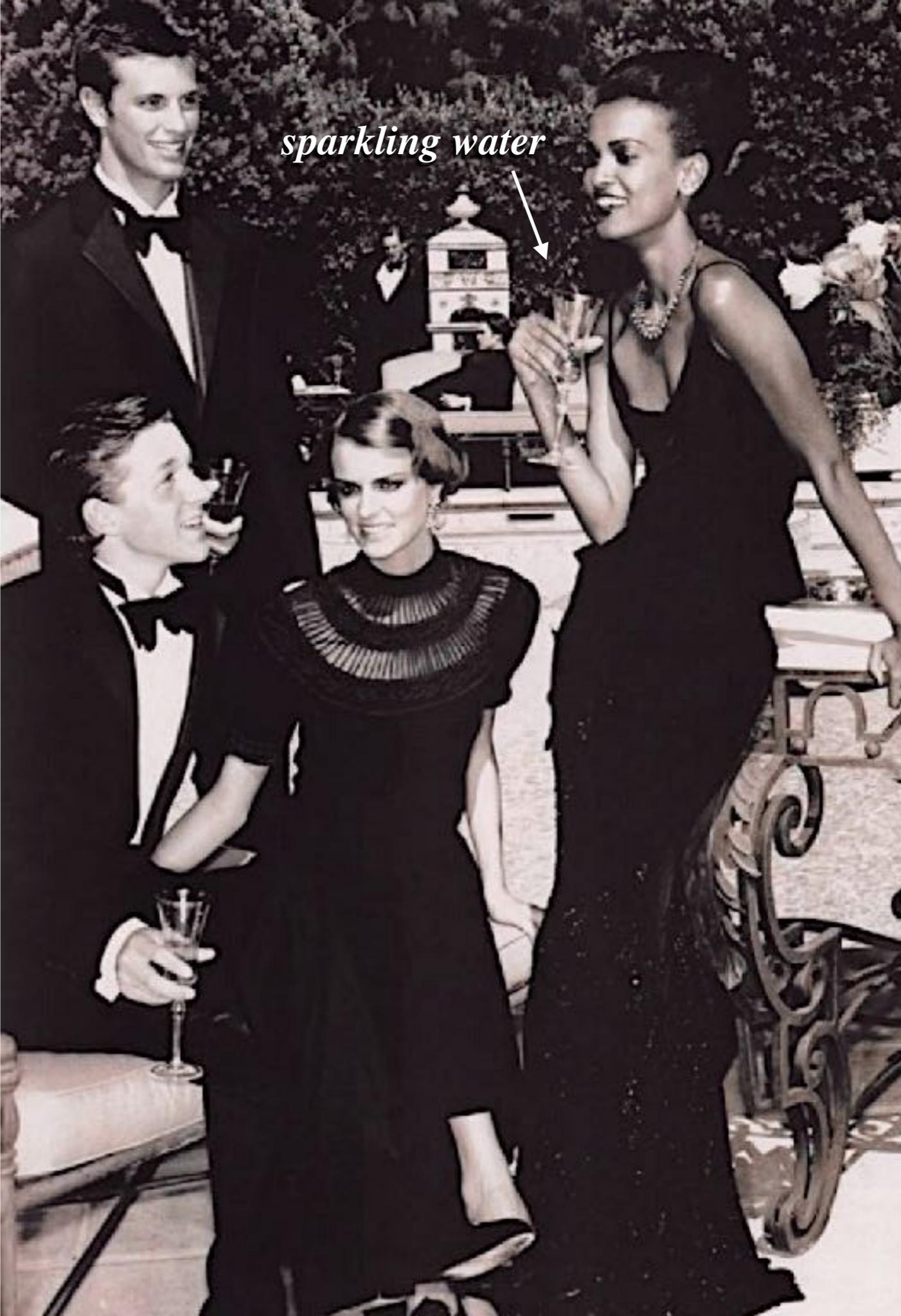
# Attributive and Referential uses of descriptions



# Both?

- But why can't both be right?
- Sometimes we seem to use descriptions in the way Russell portrays (to denote)
- Sometimes we seem to use descriptions in the way Strawson portrays (to refer)

*'The woman drinking champagne is hosting the party'*



# Attributive vs Referential

- Keith Donnellan (1966): we should distinguish **attributive** and **referential** uses of definite descriptions
- Both Russell and Strawson assume that how a phrase like '*the woman drinking champagne*' functions doesn't vary with use. But it does!
- Both Russell and Strawson assume that when there is nothing that fits the description, the statement can't be true. But it can!

(Another example: 'the murderer is clever', said of a clever but innocently convicted person in a courtroom)



## REFERENCE AND DEFINITE DESCRIPTIONS<sup>1</sup>

### I

DEFINITE descriptions, I shall argue, have two possible functions. They are used to refer to what a speaker wishes to talk about, but they are also used quite differently. Moreover, a definite description occurring in one and the same sentence may, on different occasions of its use, function in either way. The failure to deal with this duality of function obscures the genuine referring use of definite descriptions. The best-known theories of definite descriptions, those of Russell and Strawson, I shall suggest, are both guilty of this. Before discussing this distinction in use, I will mention some features of these theories to which it is especially relevant.

# Ontological commitment



# W.V.O. Quine

## ON WHAT THERE IS \*

A curious thing about the ontological problem is its simplicity. It can be put in three Anglo-Saxon monosyllables : “What is there?” It can be answered, moreover, in a word — “Everything” — and everyone will accept this answer as true. However, this is merely to say that there is what there is. There remains room for disagreement over cases; and so the issue has stayed alive down the centuries.

# Ontologically committal statements

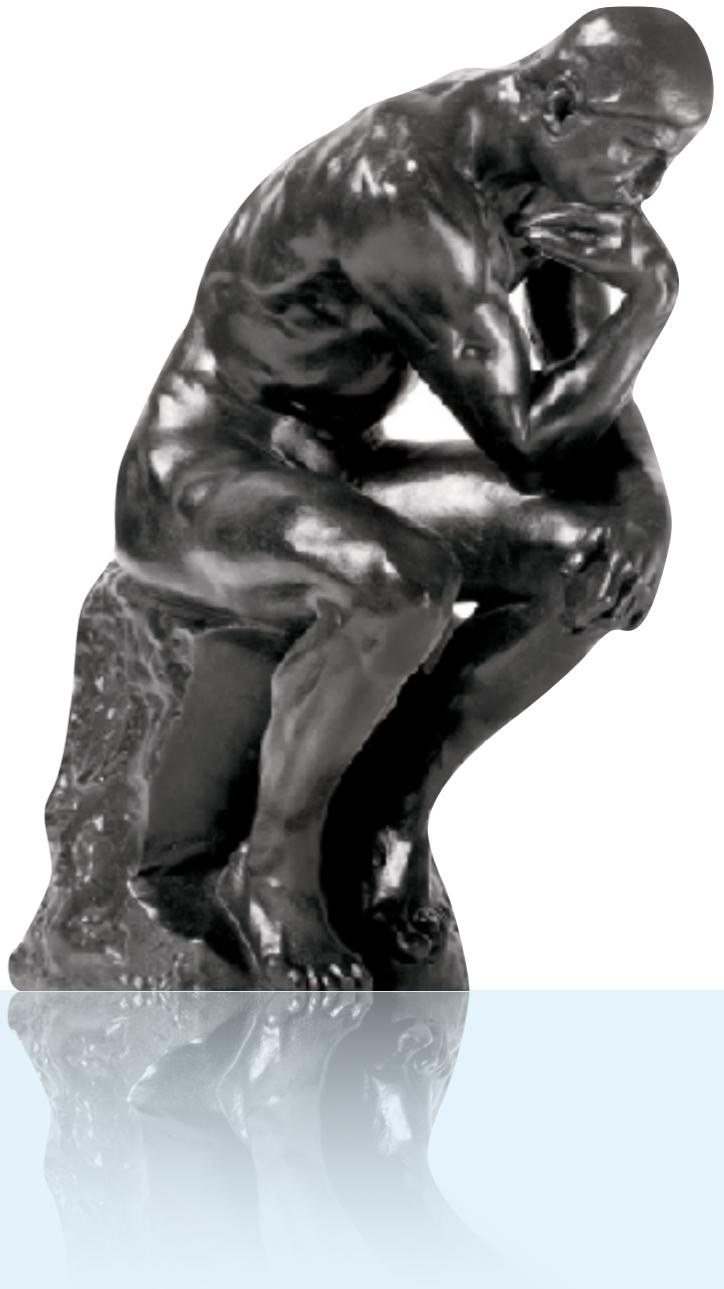
- Quine's famous slogan:  
**“To be is to be the value of a variable”**
- When we describe the world we quantify over things or ‘entities’. (e.g. ’All electrons have charge’:  $\forall x \text{Ex} \rightarrow \text{Cx}$ )
- Such statements says that there are electrons, the xs. In other words, it says that there are entities satisfying the predicate ‘\_\_is an electron’)



The idea is – roughly – that one tells what a theory says there is by putting it in predicate calculus notation, and asking what kinds of thing are required as values of its variables if theorems beginning ' $(\exists x)\dots$ ' are to be true. (So a theory in which ' $(\exists x) (x \text{ is prime and } x > 1,000,000)$ ' is a theorem is committed to the existence of prime numbers greater than a million, and *a fortiori* to the existence of prime numbers and to the existence of numbers.)

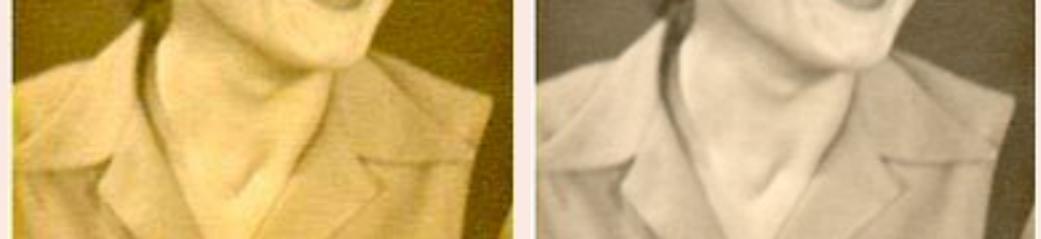
# Quantification and ontology

- ‘A philosopher thought hard’
  - $Tx$  is sometimes satisfied by something that satisfies  $Px$
  - $\exists x Px \wedge Tx$
- Quine sketches a connection between language and ontology: our (true) language ontologically commits us to the existence of values of the (implicit) quantifiers



# Objectual and substitutional quantification

Ruth Barcan Marcus,  
‘Interpreting quantification’  
(1962)



# Substitutional interpretation

- Quine's interpretation of the quantifiers is *objectual*: ' $\exists x Px$ ' is interpreted as: at least one object in the domain satisfies the predicate '\_is P'
- Marcus suggests a substitutional interpretation:  
 $\exists x Px$  is interpreted as: at least one substitution instance of 'Px' is true
- A substitution instance of 'Px' is a sentence in which we replace the *variable* 'x' with a *name* (e.g. Pa, Pb, Pc,... etc.)



# Postponing ontological questions

- What is significant about the substitutional interpretation (SI) is that it does not make quantificational phrases as such ontological committal
- Instead, what's said about the world in a phrase such as 'a philosopher thought hard' ( $\exists x Px \wedge Tx$ ), depends on what is said in admissible substitution instances, like 'Socrates thought hard', 'Marcus thought hard', 'Sherlock Holmes thought hard' etc.
- What are the ontological commitments of phrases like 'Marcus thought hard'? Who knows! The point is that we can postpone that discussion when we are just interested in understanding quantification

# One argument for SI

- Consider the claim '**some fictional characters are clever**'. It seems we should spell out its logical form as follows:

$\exists x Fx \wedge Cx$

- On the objectual reading, this sentence (when true) commits us to there being fictional characters in our domain. ("There is something which is both a fictional character and clever") If the domain is just the universe (as Quine thinks), then we've committed ourselves to the existence of fictional characters!
- On the substitutional reading, this doesn't happen: ' $\exists x Fx \wedge Cx$ ' is true iff at least one substitution instance is true. Consider 'Sherlock Holmes is a fictional character and clever' ( $Fs \wedge Cs$ ). That seems true. And so we see how  $\exists x Fx \wedge Cx$  can be true without supposing that Sherlock Holmes somehow exists

# Another argument for SI

- The law of excluded middle tells us that either P is true or not-P is true
- Let ‘P’ be the FOL sentence  $Fa$
- We can then say that  $Fa \vee \neg Fa$  is a logical truth ( $\models Fa \vee \neg Fa$ )
- But then we should be able to infer  $\models \exists x Fx \vee \neg Fx$



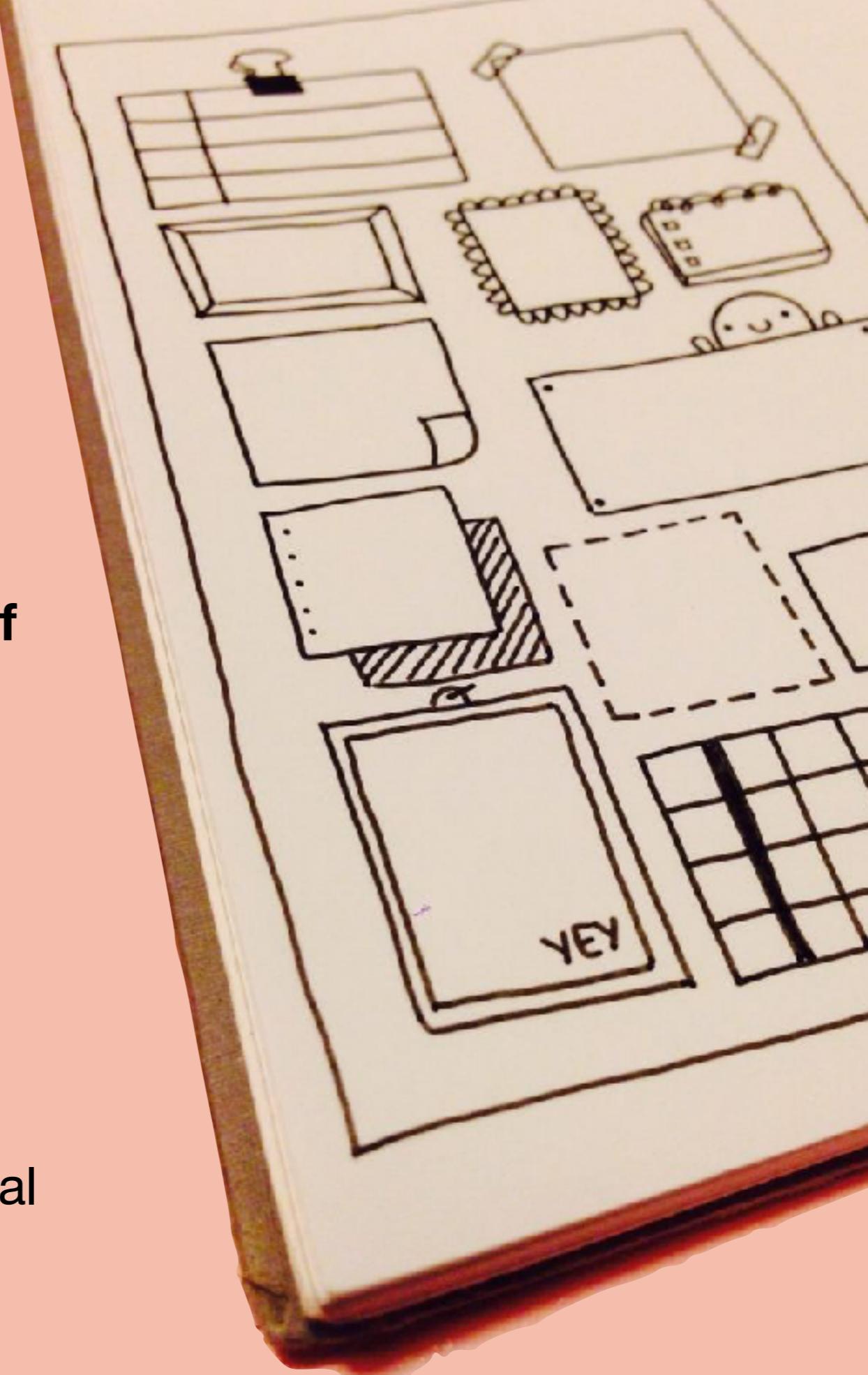
# Another argument for SI

- $\models \exists x Fx \vee \neg Fx$
- The objectual interpretation of the existential quantifier seems to imply that now there is at least one object which is either F or not F, i.e. that there's at least one object. Yet whether something exists or not shouldn't be a matter of logic!
- The substitutive interpretation doesn't have to say this. All  $\exists x Fx \vee \neg Fx$  tells us is that there is at least one substitution instance (i.e. another, simpler sentence) that is true. Take 'Pegasus is either a horse or he isn't'; this seems true, but it doesn't commit us to thinking that Pegasus exists



# Summary

1. **Descriptions and presupposition**  
(Russell vs Strawson)
2. **Attributive and referential uses of descriptions**  
(Donnellen's distinction)
3. **Ontological commitment**  
(Quine 'on what there is')
4. **Objectual and substitutional quantification**  
(Marcus's alternative, non-committal interpretation)



# Good luck!

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