

# Knowledge: What is it?

Thiago X. de Melo

# Outline

Introduction to 'Conceptual Analysis' and 'counter-examples'

Truth, Belief and Knowledge

JTB: Justified True Belief

Gettier vs. JTB

Cornman, Lehrer and Pappas

# What's a lie? (Intro to conceptual analysis)

# What's a lie? (Intro to conceptual analysis)

Note: our aim here is to offer an analysis of **Knowledge**. But to understand how conceptual analysis work, let's first consider another case before knowledge: What is a **lie**?

# What's a lie? (Intro to conceptual analysis)

Note: our aim here is to offer an analysis of **Knowledge**. But to understand how conceptual analysis work, let's first consider another case before knowledge: What is a **lie**? You might read the question above as:

- ▶ What does it mean to say that someone *S* *lied* about something *P*?

# What's a lie? (Intro to conceptual analysis)

Note: our aim here is to offer an analysis of **Knowledge**. But to understand how conceptual analysis work, let's first consider another case before knowledge: What is a **lie**? You might read the question above as:

- ▶ What does it mean to say that someone *S* *lied* about something *P*?

# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

In other words:

- ▶ A person  $S$  lies about a proposition  $P$  just in case *all* the conditions below are met:



# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

In other words:

- ▶ A person  $S$  lies about a proposition  $P$  just in case *all* the conditions below are met:
  - i)  $P$  is false, and
  - ii)  $S$  states  $P$ .

# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

In other words:

- ▶ A person  $S$  lies about a proposition  $P$  just in case *all* the conditions below are met:
  - i)  $P$  is false, and
  - ii)  $S$  states  $P$ .
- ▶ When we say that  $X$  occurs **just in case**  $Y$  does, we mean that either both  $X$  and  $Y$  occur or none does. Sometimes we use 'if and only if' (or '**iff**') instead.

# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

In other words:

- ▶ A person  $S$  lies about a proposition  $P$  just in case *all* the conditions below are met:
  - i)  $P$  is false, and
  - ii)  $S$  states  $P$ .
- ▶ When we say that  $X$  occurs **just in case**  $Y$  does, we mean that either both  $X$  and  $Y$  occur or none does. Sometimes we use 'if and only if' (or '**iff**') instead.
- ▶ If we want to show that such a statement is false, we must show a **counter-example**, that is, we must show an example where  $X$  occurs without  $Y$ ; or vice-versa,  $Y$  without  $X$ .

# What's a lie? (Intro to conceptual analysis)

Here's one attempt to define what a lie is:

- ▶ 'To lie is to state something that is false.'

In other words:

- ▶ A person  $S$  lies about a proposition  $P$  just in case *all* the conditions below are met:
  - i)  $P$  is false, and
  - ii)  $S$  states  $P$ .
- ▶ When we say that  $X$  occurs **just in case**  $Y$  does, we mean that either both  $X$  and  $Y$  occur or none does. Sometimes we use 'if and only if' (or '**iff**') instead.
- ▶ If we want to show that such a statement is false, we must show a **counter-example**, that is, we must show an example where  $X$  occurs without  $Y$ ; or vice-versa,  $Y$  without  $X$ .

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

{

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

{

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \end{array} \right.$



# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

- $$\left\{ \begin{array}{ll} \text{i)} & S \text{ states } P \\ \text{ii)} & P \text{ is false} \end{array} \right.$$

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \\ \text{ii) } P \text{ is false} \end{array} \right.$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false} \end{array} \right.$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false (True)} \end{array} \right.$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$       iff (True)  $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false (True)} \end{array} \right.$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

$$\begin{array}{l} \text{A person } S \text{ lies about} \\ \text{a proposition } P \quad (\text{False}) \quad \text{iff} \quad (\text{True}) \end{array} \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false (True)} \end{array} \right.$$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (False) iff ~~X~~ (True)  $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false (True)} \end{array} \right.$

Now, let's test the analysis above against Case 1.

# What's a lie? (Intro to conceptual analysis)

Case 1 : Jane believes that the Earth is flat. And she says to Jim 'Hey Jim, the Earth is flat'.

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (False) iff ~~X~~ (True)  $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } P \text{ is false (True)} \end{array} \right.$

Now, let's test the analysis above against Case 1.

The analysis **fails**. Saying something false is *not sufficient* for lying.



# What's a lie? (Intro to conceptual analysis)

In fact, saying something *false* is not even necessary for lying. Sometimes people lie about something that unbeknownst to her is in fact true, as long as they *believe* it's false. For example:

# What's a lie? (Intro to conceptual analysis)

In fact, saying something *false* is not even necessary for lying. Sometimes people lie about something that unbeknownst to her is in fact true, as long as they *believe* it's false. For example:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

In fact, saying something *false* is not even necessary for lying. Sometimes people lie about something that unbeknownst to her is in fact true, as long as they *believe* it's false. For example:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

This suggests the following analysis:

# What's a lie? (Intro to conceptual analysis)

In fact, saying something *false* is not even necessary for lying. Sometimes people lie about something that unbeknownst to her is in fact true, as long as they *believe* it's false. For example:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

This suggests the following analysis:

A person $S$ lies about a proposition $P$	iff	$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false} \end{array} \right.$
--	-----	--

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

}

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

}

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

i)  $S$  states  $P$



# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

- i)  $S$  states  $P$
- ii)  $S$  believes that  
 $P$  is false

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false} \end{array} \right.$

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$                       **iff**                       $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false} \end{array} \right.$

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

iff

- i)  $S$  states  $P$  (True)
- ii)  $S$  believes that  
 $P$  is false (False)

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

## What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff** (False)

- i)  $S$  states  $P$  (True)
- ii)  $S$  believes that  $P$  is false (False)

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (False) **iff** (False)

$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false (False)} \end{array} \right.$

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (False) iff ✓ (False)

$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false (False)} \end{array} \right.$

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (False) iff ✓ (False)

$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that } P \text{ is false (False)} \end{array} \right.$

Consider Case 1 again:

**Case 1** : Jane believes that the Earth is flat. She then tells Jim 'Hey Jim, the Earth is flat', so as to inform him.

The analysis **succeeds** in this case. Case 1 is not a problem anymore.



# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

{

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

{

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \end{array} \right.$

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

- i)  $S$  states  $P$
- ii)  $S$  believes that  
 $P$  is false

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

- $$\left\{ \begin{array}{l} \text{i) } S \text{ states } P \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false} \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

$$\begin{array}{l} \text{A person } S \text{ lies about} \\ \text{a proposition } P \end{array} \quad \text{iff} \quad \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false} \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$

**iff**

- i)  $S$  states  $P$  (True)
- ii)  $S$  believes that  
 $P$  is false (True)

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.



# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

$$\begin{array}{l} \text{A person } S \text{ lies about} \\ \text{a proposition } P \end{array} \quad \text{iff } (\underline{\text{True}}) \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false } (\underline{\text{True}}) \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

$$\begin{array}{l} \text{A person } S \text{ lies about} \\ \text{a proposition } P \quad (\text{True}) \quad \text{iff} \quad (\underline{\text{True}}) \end{array} \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false } (\underline{\text{True}}) \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

$$\begin{array}{l} \text{A person } S \text{ lies about} \\ \text{a proposition } P \quad (\text{True}) \quad \text{iff} \checkmark (\underline{\text{True}}) \end{array} \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \quad P \text{ is false } (\underline{\text{True}}) \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

$$\text{A person } S \text{ lies about a proposition } P \quad (\text{True}) \quad \text{iff} \checkmark (\underline{\text{True}}) \left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that } P \text{ is false } (\underline{\text{True}}) \end{array} \right.$$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

The analysis **succeeds** in this case. Case 2 is not a problem anymore.

# What's a lie? (Intro to conceptual analysis)

Here's the proposed analysis again:

A person  $S$  lies about  
a proposition  $P$  (True) iff ✓ (True)  $\left\{ \begin{array}{l} \text{i) } S \text{ states } P \text{ (True)} \\ \text{ii) } S \text{ believes that} \\ \text{ } P \text{ is false (True)} \end{array} \right.$

Consider Case 2 now:

**Case 2** : Bob believes that the Earth is flat. But then, wanting you to believe that it's round, he tells you 'hey, the Earth is round'.

The analysis **succeeds** in this case. Case 2 is not a problem anymore.

Note: There are further problems with this analysis. But our focus here will be on a conceptual analysis of **knowledge**.

# Our question

What's knowledge?

## Recall: knowledge implies truth and belief

- ▶ Someone knows that  $P$  only if  $P$  is true.  
(Truth is necessary for knowledge.)

---

<sup>1</sup>See slides of Jan 28—‘Knowledge: Three things we know about it’ for explanation.

## Recall: knowledge implies truth and belief

- ▶ Someone knows that  $P$  only if  $P$  is true.  
(Truth is necessary for knowledge.)
- ▶ Someone *knows* that  $P$  only if she *believes* that  $P$ .  
(Belief is necessary for knowledge.)

---

<sup>1</sup>See slides of Jan 28—'Knowledge: Three things we know about it' for explanation.



## Recall: knowledge implies truth and belief

- ▶ Someone knows that  $P$  only if  $P$  is true.  
(Truth is necessary for knowledge.)
- ▶ Someone *knows* that  $P$  only if she *believes* that  $P$ .  
(Belief is necessary for knowledge.)

Note: since one can believe something false but one cannot know something false, knowledge and mere belief are different.<sup>1</sup>

---

<sup>1</sup>See slides of Jan 28—'Knowledge: Three things we know about it' for explanation.

# What's truth?

But wait, what's truth?

# What's truth?

But wait, what's truth?

- ▶ E.g. the proposition that <Socrates was a philosopher> *is true*.

# What's truth?

But wait, what's truth?

- ▶ E.g. the proposition that <Socrates was a philosopher> *is true*.

What does it mean to say that this *is true*?

# What's truth?

But wait, what's truth?

- ▶ E.g. the proposition that <Socrates was a philosopher> *is true*.

What does it mean to say that this *is true*?

Here's the answer we'll accept:

- ▶ In general, that a proposition is true means just this: that *reality is the way the proposition says it is*; the proposition *corresponds to* how things really are.

# What's truth?

But wait, what's truth?

- ▶ E.g. the proposition that <Socrates was a philosopher> *is true*.

What does it mean to say that this *is true*?

Here's the answer we'll accept:

- ▶ In general, that a proposition is true means just this: that *reality is the way the proposition says it is*; the proposition *corresponds to* how things really are.
- ▶ When we say that the proposition that <Socrates was a philosopher> is true, we're saying that the world, reality, is such that that person, Socrates, was in fact a philosopher.

# What's truth?

But wait, what's truth?

- ▶ E.g. the proposition that <Socrates was a philosopher> *is true*.

What does it mean to say that this *is true*?

Here's the answer we'll accept:

- ▶ In general, that a proposition is true means just this: that *reality is the way the proposition says it is*; the proposition *corresponds to* how things really are.
- ▶ When we say that the proposition that <Socrates was a philosopher> is true, we're saying that the world, reality, is such that that person, Socrates, was in fact a philosopher.
- ▶ Truth in this sense is an *objective* matter.

# What's belief?

What's belief?



# What's belief?

What's belief?

- ▶ To believe something is to take that as true; to take a certain thought as corresponding to a fact in the world.

# What's belief?

## What's belief?

- ▶ To believe something is to take that as true; to take a certain thought as corresponding to a fact in the world.
- ▶ Note that there is a difference between *believing* something and something *being true*. Someone can believe that the Earth is flat — that is, one can take the thought that the Earth is flat as true — even if that thought is not true.

Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

$$\begin{array}{l} \text{A person } S \text{ knows} \\ \text{that } P \end{array} \quad \text{iff} \quad \left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \\ \text{ii) } P \text{ is true} \end{array} \right.$$

## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

$$\text{A person } S \text{ knows that } P \quad \text{iff} \quad \left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \\ \text{ii) } P \text{ is true} \end{array} \right.$$

But this can't work, for consider:

**Optimistic Charlie Case** : Charlie is optimistic. Everyday he wakes up believing that the weather will be really nice. He's usually wrong — in his city it rains a lot. But one day last year (say, Sept. 13), it turned out Charlie was right. It was a nice day.

## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

$$\text{A person } S \text{ knows that } P \quad \text{iff} \quad \left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \\ \text{ii) } P \text{ is true} \end{array} \right.$$

But this can't work, for consider:

**Optimistic Charlie Case** : Charlie is optimistic. Everyday he wakes up believing that the weather will be really nice. He's usually wrong — in his city it rains a lot. But one day last year (say, Sept. 13), it turned out Charlie was right. It was a nice day.

In this case we have that Charlie believed that *On Sept. 13 we'll have a nice weather*, this proposition was in fact true, and yet Charlie did *not know* that *On Sept. 13 we'll have a nice weather*.

## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

$$\begin{array}{l} \text{A person } S \text{ knows} \\ \text{that } P \end{array} \quad \text{iff} \quad \left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \text{ (True)} \\ \text{ii) } P \text{ is true (True)} \end{array} \right.$$

But this can't work, for consider:

**Optimistic Charlie Case** : Charlie is optimistic. Everyday he wakes up believing that the weather will be really nice. He's usually wrong — in his city it rains a lot. But one day last year (say, Sept. 13), it turned out Charlie was right. It was a nice day.

In this case we have that Charlie believed that *On Sept. 13 we'll have a nice weather*, this proposition was in fact true, and yet Charlie did *not know* that *On Sept. 13 we'll have a nice weather*.

## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

$$\begin{array}{l} \text{A person } S \text{ knows} \\ \text{that } P \end{array} \begin{array}{l} \text{(False)} \\ \text{iff} \end{array} \left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \text{ (True)} \\ \text{ii) } P \text{ is true (True)} \end{array} \right.$$

But this can't work, for consider:

**Optimistic Charlie Case** : Charlie is optimistic. Everyday he wakes up believing that the weather will be really nice. He's usually wrong — in his city it rains a lot. But one day last year (say, Sept. 13), it turned out Charlie was right. It was a nice day.

In this case we have that Charlie believed that *On Sept. 13 we'll have a nice weather*, this proposition was in fact true, and yet Charlie did *not know* that *On Sept. 13 we'll have a nice weather*.



## Recall: there was a third thing we said to know about knowledge

Since Knowledge implies True Belief, one might propose the following analysis:

A person  $S$  knows  
that  $P$  (False) iff  $\left\{ \begin{array}{l} \text{i) } S \text{ believes that } P \text{ (True)} \\ \text{ii) } P \text{ is true (True)} \end{array} \right.$

But this can't work, for consider:

**Optimistic Charlie Case** : Charlie is optimistic. Everyday he wakes up believing that the weather will be really nice. He's usually wrong — in his city it rains a lot. But one day last year (say, Sept. 13), it turned out Charlie was right. It was a nice day.

In this case we have that Charlie believed that *On Sept. 13 we'll have a nice weather*, this proposition was in fact true, and yet Charlie did *not know* that *On Sept. 13 we'll have a nice weather*.

Recall: there was a third thing we said to know about knowledge

This shows that:

3. It's possible to *believe* something *true* without really *knowing* it. (Even though necessary, truth and belief are *not sufficient* for knowledge.)

## Recall: there was a third thing we said to know about knowledge

This shows that:

3. It's possible to *believe* something *true* without really *knowing* it. (Even though necessary, truth and belief are *not sufficient* for knowledge.)
- ▶ What else then? Is there something else  $X$  that is also necessary to have knowledge, besides truth and belief? Is there something else  $X$ , such that: If someone knows  $P$ , then  $X$  is the case?

## Recall: there was a third thing we said to know about knowledge

This shows that:

3. It's possible to *believe* something *true* without really *knowing* it. (Even though necessary, truth and belief are *not sufficient* for knowledge.)
- ▶ What else then? Is there something else  $X$  that is also necessary to have knowledge, besides truth and belief? Is there something else  $X$ , such that: If someone knows  $P$ , then  $X$  is the case?
- ▶ If so, would this  $X + \textit{belief} + \textit{truth}$  be *sufficient* for having knowledge?

# Outline

Introduction to 'Conceptual Analysis' and 'counter-examples'

Truth, Belief and Knowledge

**JTB: Justified True Belief**

**Gettier vs. JTB**

Cornman, Lehrer and Pappas

# JTB

JTB Someone  $S$  knows that  $P$  *just in case* the following conditions are *all* met:

# JTB

JTB Someone  $S$  knows that  $P$  *just in case* the following conditions are *all* met:

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is justified in believing that  $P$

# JTB

JTB Someone  $S$  knows that  $P$  *just in case* the following conditions are *all* met:

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is justified in believing that  $P$

What is justification?



# What is justification?

Whatever **justification** is, it either guarantees truth or it doesn't:

# What is justification?

Whatever **justification** is, it either guarantees truth or it doesn't:

- ▶ Suppose it does. This means that, if someone  $S$  is justified in believing  $P$ , then  $P$  must be true.

# What is justification?

Whatever **justification** is, it either guarantees truth or it doesn't:

- ▶ Suppose it does. This means that, if someone  $S$  is justified in believing  $P$ , then  $P$  must be true.
  - ▶ **However**, here we have a problem: this sort of requirement has led us to **skepticism**. (Remember Descartes)

# What is justification?

Whatever **justification** is, it either guarantees truth or it doesn't:

- ▶ Suppose it does. This means that, if someone  $S$  is justified in believing  $P$ , then  $P$  must be true.
  - ▶ **However**, here we have a problem: this sort of requirement has led us to **skepticism**. (Remember Descartes)
- ▶ Suppose justification does *not* entail truth. This means that sometimes it's possible for someone to be justified in believing that  $P$  is true without  $P$  being actually true.

# What is justification?

Whatever **justification** is, it either guarantees truth or it doesn't:

- ▶ Suppose it does. This means that, if someone  $S$  is justified in believing  $P$ , then  $P$  must be true.
  - ▶ **However**, here we have a problem: this sort of requirement has led us to **skepticism**. (Remember Descartes)
- ▶ Suppose justification does *not* entail truth. This means that sometimes it's possible for someone to be justified in believing that  $P$  is true without  $P$  being actually true.
  - ▶ **However**, here we have another problem, namely, the **Gettier Cases**. Edmund Gettier argued that, if we assume that justification doesn't imply truth, then the *JTB analysis of knowledge must be wrong*.



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now?



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky!





Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

A person  $S$  knows  
that  $P$                       iff                      {

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is justified  
in believing that  $P$  is true



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

A person $S$ knows that $P$ (False)      iff	{	i) $S$ believes that $P$
		ii) $P$ is true
		iii) $S$ is justified in believing that $P$ is true



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

A person $S$ knows that $P$ (False) iff	{	<ul style="list-style-type: none"><li>i) <math>S</math> believes that <math>P</math> (True)</li><li>ii) <math>P</math> is true</li><li>iii) <math>S</math> is justified in believing that <math>P</math> is true</li></ul>
--	---	--



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

A person $S$ knows that $P$ (False) iff	{	i) $S$ believes that $P$ (True)
		ii) $P$ is true(True)
		iii) $S$ is justified in believing that $P$ is true



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

A person $S$ knows that $P$ (False)      iff	{	i) $S$ believes that $P$ (True)
		ii) $P$ is true(True)
		iii) $S$ is justified in believing that $P$ is true(True)



Consider the following case:

**Russell's Clock** : Suppose I've have had an old clock for years. It doesn't have a second hand, but its hour and minute hands have always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. Suppose I go into my office in the morning and start working. I don't look at the clock, until it just so happens to be 11:58. I look at the clock, form the belief that it is 11:58 and go to the kitchen to get something to eat.

Do I *know* it's 11:58 right now? No! I was lucky! And yet, I justifiably believe something true.

- A person  $S$  knows  
that  $P$  (False) iff  $\times$  {
- i)  $S$  believes that  $P$  (True)
  - ii)  $P$  is true(True)
  - iii)  $S$  is justified  
in believing that  $P$  is true(True)

## Conclusion

- ▶ Russell's clock case is a case where we have justified true belief without knowledge.



## Conclusion

- ▶ Russell's clock case is a case where we have justified true belief without knowledge.
- ▶ Justified True Belief is not sufficient for Knowledge.

## Conclusion

- ▶ Russell's clock case is a case where we have justified true belief without knowledge.
- ▶ Justified True Belief is not sufficient for Knowledge.
- ▶ But then **the JTB analysis is false**.

- ▶ Russell's clock case is a **Gettier case**.

- ▶ Russell's clock case is a **Gettier case**.
- ▶ In general, Gettier cases are cases in which someone  $S$  doesn't know something  $P$  despite believing that  $P$ ,  $P$  being true, and  $S$  being justified (in the relevant sense) in believing that  $P$  is true.

- ▶ Russell's clock case is a **Gettier case**.
- ▶ In general, Gettier cases are cases in which someone  $S$  doesn't know something  $P$  despite believing that  $P$ ,  $P$  being true, and  $S$  being justified (in the relevant sense) in believing that  $P$  is true.
- ▶ In *Is Justified True Belief Knowledge?* Edmund Gettier argued that the JTB analysis is wrong from other two cases.

So here's our previous problem again:

- ▶ Either **justification** requires that truth is guaranteed or it doesn't.

So here's our previous problem again:

- ▶ Either **justification** requires that truth is guaranteed or it doesn't.
  - ▶ If justification guarantees truth, then it seems that we have to face the **skeptic**. Descartes tried, but it's not clear that he was successful.

So here's our previous problem again:

- ▶ Either **justification** requires that truth is guaranteed or it doesn't.
  - ▶ If justification guarantees truth, then it seems that we have to face the **skeptic**. Descartes tried, but it's not clear that he was successful.
  - ▶ If justification doesn't require that truth is guaranteed, then, given the Gettier cases, the JTB analysis of knowledge doesn't work. But then, we **don't know what knowledge is**.



So here's our previous problem again:

- ▶ Either **justification** requires that truth is guaranteed or it doesn't.
  - ▶ If justification guarantees truth, then it seems that we have to face the **skeptic**. Descartes tried, but it's not clear that he was successful.
  - ▶ If justification doesn't require that truth is guaranteed, then, given the Gettier cases, the JTB analysis of knowledge doesn't work. But then, we **don't know what knowledge is**.
- ▶ Thus, we seem to face a **dilemma**: we have a couple of options, neither of which seems to be acceptable.

So here's our previous problem again:

- ▶ Either **justification** requires that truth is guaranteed or it doesn't.
  - ▶ If justification guarantees truth, then it seems that we have to face the **skeptic**. Descartes tried, but it's not clear that he was successful.
  - ▶ If justification doesn't require that truth is guaranteed, then, given the Gettier cases, the JTB analysis of knowledge doesn't work. But then, we **don't know what knowledge is**.
- ▶ Thus, we seem to face a **dilemma**: we have a couple of options, neither of which seems to be acceptable.

# Outline

Introduction to 'Conceptual Analysis' and 'counter-examples'

Truth, Belief and Knowledge

JTB: Justified True Belief

Gettier vs. JTB

Cornman, Lehrer and Pappas

Cornman, Lehrer and Pappas (**CLP**) propose another analysis of knowledge:

A person  $S$  knows  
that  $P$

**iff**



Cornman, Lehrer and Pappas (**CLP**) propose another analysis of knowledge:

A person  $S$  knows  
that  $P$

iff

- i)  $S$  believes that  $P$
- ii)  $P$  is true

Cornman, Lehrer and Pappas (**CLP**) propose another analysis of knowledge:

A person  $S$  knows that  $P$       iff      {

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is (well) justified in believing that  $P$  is true

Cornman, Lehrer and Pappas (**CLP**) propose another analysis of knowledge:

A person  $S$  knows  
that  $P$

iff

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is (well) justified  
in believing that  $P$  is true
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in  
believing  $P$  does not depend  
on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.





Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$

iff

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is completely justified in believing that  $P$  is true
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in believing  $P$  does not depend on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False) iff

- i)  $S$  believes that  $P$
- ii)  $P$  is true
- iii)  $S$  is completely justified in believing that  $P$  is true
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in believing  $P$  does not depend on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False) iff

- i)  $S$  believes that  $P$  (True)
- ii)  $P$  is true
- iii)  $S$  is completely justified in believing that  $P$  is true
- iv)  $S$ 's justification is undefeated. (That is,  $S$ 's justification in believing  $P$  does not depend on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False) iff

- i)  $S$  believes that  $P$  (True)
- ii)  $P$  is true(True)
- iii)  $S$  is completely justified  
in believing that  $P$  is true
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in  
believing  $P$  does not depend  
on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False) iff

- i)  $S$  believes that  $P$  (True)
- ii)  $P$  is true(True)
- iii)  $S$  is completely justified  
in believing that  $P$  is true(True)
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in  
believing  $P$  does not depend  
on any false assumption.)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False) iff

- i)  $S$  believes that  $P$  (True)
- ii)  $P$  is true (True)
- iii)  $S$  is completely justified  
in believing that  $P$  is true (True)
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in  
believing  $P$  does not depend  
on any false assumption.) (False)



Consider Russell's case again:

**Russell's Clock** : I've have had an old clock for years. It's always been accurate. Unbeknownst to me, the clock stopped last night at 11:58. In the morning I don't look at the clock, until it just so happens to be 11:58. I look at the clock, and then form the belief that it is 11:58.

The CLP analysis gives us the expected result:

A person  $S$  knows  
that  $P$  (False)

iff ✓

- i)  $S$  believes that  $P$  (True)
- ii)  $P$  is true (True)
- iii)  $S$  is completely justified  
in believing that  $P$  is true (True)
- iv)  $S$ 's justification is undefeated.  
(That is,  $S$ 's justification in  
believing  $P$  does not depend  
on any false assumption.) (False)

Can you imagine a case where the analysis proposed by Cornman, Lehrer and Pappas fails?

Homework 2 presents the 'Fake barns case'. Is that a counter-example to CLP?