

# ONTOLOGY

## **Predicate logic is still confusing**

The use of the predicate logic is continuing to make it hard for me to understand what exactly is going on and being discussed. Me knowing the way I learn I feel like I'll be able to get a better grasp of it by doing in class exercises that involve taking arguments and translating them into the predicate logic form.

—Brendan Forde

What is confusing me in the Introduction to Ontology, is in the part of the chapter regarding the regimentation and semantic ascent and the "using symbols standing in for the predicates".

Given the example of the winged horse pegasus, is it really necessary to introduce those symbols into an equation as such? I feel as though the negation symbol followed by the existential quantifier makes sense, but then i got completely lost regarding what followed:

— $\exists x (((Wx \wedge Hx) \wedge Cx) \wedge y (((Wy \wedge Hy) \wedge Cy) \wedge y=x))$

—Meagan O'Connell

I was following Quine's view very well until he started getting into predicate logic. —Ariel Ortega

## **What is the point of ontology?**

I understand the process of trying to dissect what exists and what does not exist, and whether or not a non existing entity can also have a state of being. But what is the end goal for all of this?

...

I'm assuming the textbook uses pointless examples as a preparation for topics that will actually matter but it's still hard to wrap my head around because it feels like I'm engaging in a pointless argument. —Brendan Forde

## **An argument for the being of nonexistent entities**

- (1) Santa Claus doesn't exist
- (2) In order for (1) to be true, it must be meaningful.
- (3) In order for (1) to be meaningful, all of its parts, including the name 'Santa Claus', must be meaningful.
- (4) For a name to be meaningful is for it to refer to something.
- (5) Therefore, 'Santa Claus' must refer to something.
- (6) In order to be referred to, something must be.
- (7) Therefore Santa Claus has being.

**So what kind of being does Santa Claus have, if he doesn't exist?**

**McX (cf. John M. E. McTaggart)**

Santa Claus isn't a concrete thing. He's more like an idea in our minds.

**Wyman (cf. Alexis Meinong)**

Santa Claus isn't an actual entity. He is a merely possible entity.

To say that he doesn't exist is just to say that he is non-actual, or merely possible

## **Quine's Objections to Being without Existence**

I found Quine's slogan: no entity without identity a bit confusing. It makes sense when relating material objects, but becomes vaguer with non-material objects. Under this view, can non-material objects exist? Or does it entail materialism? —Rahman Shah

After his introduction of Wyman and McX, I did find myself wondering why should we only consider only those two approaches when referring to that which exist and which does not. [Are there other approaches to nonexistent entities?] —Chelsea Alejandro

Pegasus does not exist. Santa Claus does not exist. In these two statements, the non-existent is conceivable being? are we saying that a conceivable being can exist but not exist in actuality/reality? how existence relates to being and non-being? —Syeda Kazmi

## Quine's Objections to Being without Existence

I found the distinction between actuality and possibility confusing. I think way it's explained, lacks a real difference to me. It seems that they mean the same thing. If something actually exists, meaning it's some tangible, would it not still "exist" being a possibility? Does the mere fact that it's possible indicate that it does exist somewhere?

—Sheana Stokes

Quine distinguished between two main views (which he finds intellectually unsatisfying :) MxC -1 and Wyman-2. He goes on to talk about why he disagrees with both but I think that it is more useful to see how these two views can be compatible than show them wrong. So, for McX Santa Claus and Pegasus are ideas in the mind, not live physical beings. For Wyman, they are real physical beings just not ones that exist in our actual space and time. In order to have an idea of something, we must at least in our imagination hold it as true, as real. The idea is created in the mind independently of the judgement of it being a real physical thing or not. Imagination is the (abstract) space which allows actual things to play with non-actual things. In it, ontological categories that might exist outside cannot hold as separated. —Loreta Adviu

## **Is "exist" really univocal?**

Inwagen's 3rd thesis "Existence is univocal". I am not sure why this is helpful. I could see a value in saying that particles exist in a different sense than thoughts do. Is there an example of how this is used? —Miriam Jallander

For the pegasus or chair example, is that the concept of a pegasus/chair, the definitions of them, physical bodies of them, what is called sense-data of them, or some material things of them regardless of human notions....? In my opinion, what is interesting to think about is to think of possible effects or issues if such and such things exist or do not exist. —Chateldon Nabeshima



**WILLARD VAN ORMAN QUINE**  
(1908-2000)

# Some Historical Context

Quine (along with many other analytic philosophers) were very impressed by certain notable early-20th-Century advances in human knowledge:

- Incredible recent advances in recent science (especially physics, but also biology, chemistry, genetics, medicine, etc.).
- Major advances in logic, as a tool in both mathematics and philosophy. The invention of predicate logic, which seemed to be a completely general tool for studying reasoning about any subject.

Many early analytic philosophers concluded that philosophical speculation on its own just couldn't match what the sciences had been giving us.

But maybe philosophy could use the new tools of logic to help us to understand the results of the sciences.

# Quine's Naturalism

“...it is within science itself, and not in some prior philosophy, that reality is to be identified and described.”

Quine, *Theories and Things* (1981)

# Naturalistic Metaphysics

“Quine's approach to his naturalistic analogue of metaphysics is through the idea of regimented theory. Regimented theory is our overall science, the sum total of our best and most objective knowledge about the world, reformulated in the clearest and simplest form.”

—Peter Hylton, *W.V.O. Quine*, Stanford Encyclopedia of Philosophy

# Semantic Ascent

Rather than trying to address philosophical questions and claims directly, we study the meanings of the linguistic expressions used to ask those questions and make those claims.

# Semantic Ascent

Two schools of thought:

**Ordinary language philosophy:** We should try to understand the metaphysical commitments that are implicit in our ordinary language.

**Ideal language philosophy:** We should try to construct an artificial language (like those used in logic) that gives us more transparent access to reality than ordinary language does.

## **Science vs. Common Sense**

I'm confused by the possible role for common sense in metaphysics. While it certainly seems desirable to maintain grounding in the common language and understanding of everyday life, without being able to more clearly define what common sense is comprised of I'm struggling to see how it can realistically be used as a tool. Would there be a distinction to make between common language and common sense? If a complex argument was rephrased to be understandable in common terms would this be the same as common sense? —Matt Parisi

Animals trust their intuition and decide their next actions to survive. However, human beings can doubt their (common) sense, trust science, and develop their civilizations. If naturalists and physicalists argue that "the only source of objective knowledge about what the world is like must come from science (51)," why one cannot ignore common sense in metaphysics? —Misa Sukegawa

# Quine's method in ontology

## **Step 1: Articulate your overall best theory of the world**

Make a list of all of the sentences that we have good reason to think are true.

## **Step 2: Regimentation**

Translate all of the sentences into first-order predicate logic, taking care to paraphrase away as many unnecessary things as possible.

## **Step 3: Check which existence claims are made**

Check what has to exist in order for the sentences to be true. (See which existential quantifications are made.)

## Step 2: Regimentation

Translate all of the sentences into first-order predicate logic, taking care to paraphrase away as many unnecessary things as possible.

### 2.1 Translation

Electrons exist  $\rightarrow \exists xEx$

Some electrons are bonded to protons  
 $\rightarrow \exists x((Ex \wedge Px) \wedge Bxy)$

## **Step 2: Regimentation**

Translate all of the sentences into first-order predicate logic, taking care to paraphrase away as many unnecessary things as possible.

### 2.2 Paraphrase

If we can paraphrase a sentence so that it apparently loses some of its ontological commitments, but without changing what it says, then they weren't real ontological commitments in the first place.

**Some zoological species are cross-fertile.**

(apparent commitment to the existence of species)



**Either some lions mate with some tigers to produce offspring, or some bears mate with some elephants to produce offspring, or...**

(a (much longer) way of saying the same thing, but without quantifying over species)

**Cynthia suggests:**



**Some animals are cross-fertile.**

(much simpler, only commits us to animals and cross-fertile things)

(other questions about this from Cynthia, Aanisah?)

## **Paraphrase**

My question: How can someone reject the idea that species as whole aren't cross-fertile and then affirm that specific members have the characteristic of being "cross-fertile." Furthermore, I didn't understand Ney's explanation of why Quine thinks it's better to symbolically represent individual species like lions being "cross-fertile." It seems easier to symbolically represent the sentence "some zoological species are cross-fertile." By using the term "species," it's understood that animals like lions, tigers, and zebras are included. I don't know why each animal needs to be symbolically represented, like the example on pg.44 shows. —Aanisah Sheriff

### EXERCISE 1.3

## Producing Paraphrases

The logician Alonzo Church (1903–1995) once gave a parody of Quine's method in which he suggested that all sentences seeming to quantify over women could be paraphrased into statements about their husbands. In a sentence seeming to quantify over a woman, one would regiment this instead as quantifying over a man's "secondary presence." In such a way, following Quine's suggestion, it would be possible to eliminate ontological commitment to women altogether, a view he jokingly referred to as 'ontological misogyny.' As Church puts it, "the misogynist is led by his dislike and distrust of women to omit them from his ontology. Women are not real, he tells himself, and derives great comfort from the thought – there *are* no such things."<sup>12</sup> Let's assume that Church wants to accept the truth of the following sentence:

Some U.S. Senators are women.

What is the paraphrase that Church's theory would recommend?

In addition, explain what exactly makes Church's example so absurd, and how Quine would distinguish Church's case from his example involving zoological species. What makes that a more acceptable use of the method of paraphrase?

**My shirt has the property of blueness.**

(apparent commitment to the existence of properties and blueness)



**My shirt is blue.**

(says the same thing, but no longer quantifies over properties or blueness)

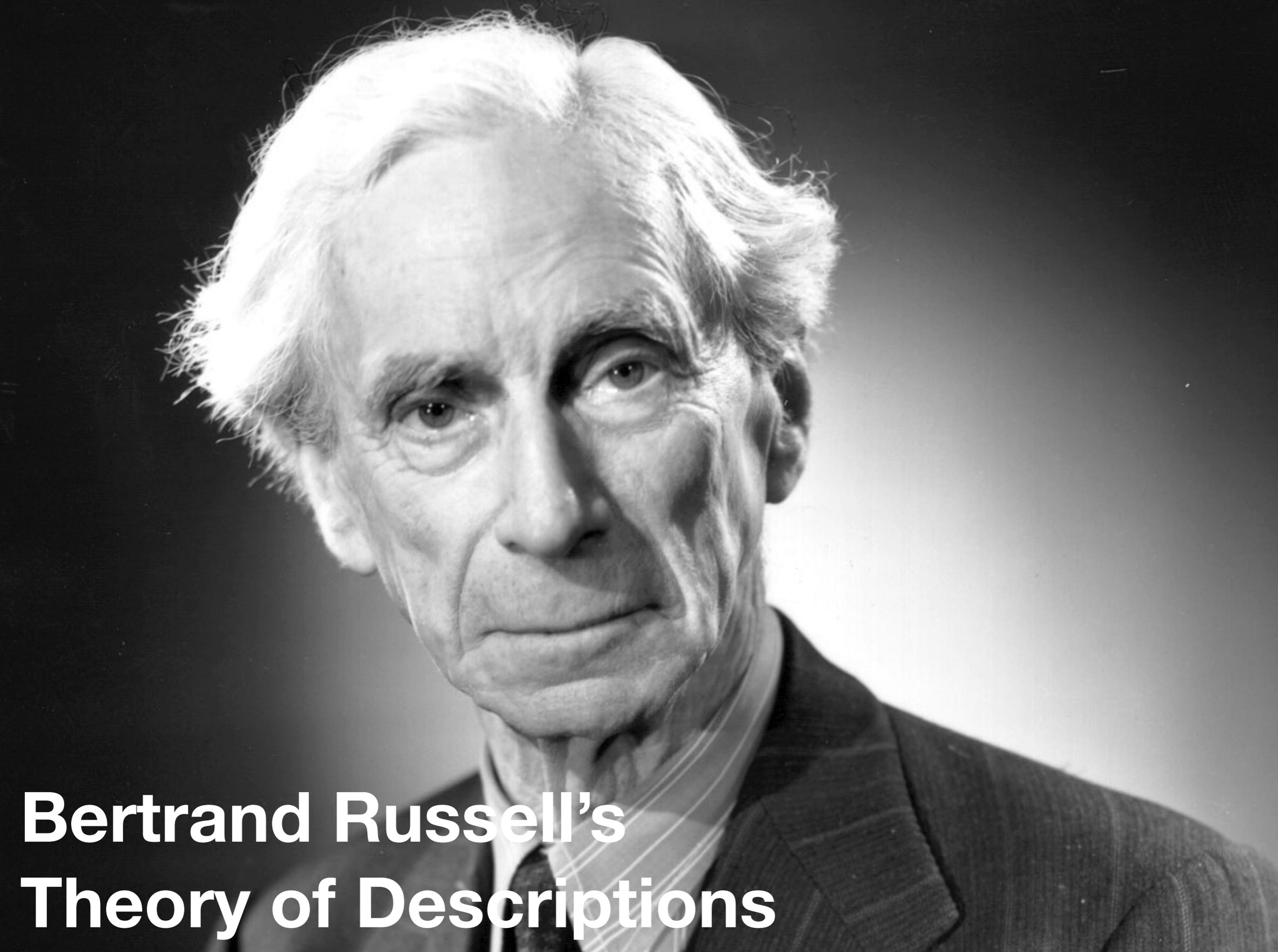
**We use logic for the sake of clarity.**

(apparent commitment to the existence of sakes and clarity)



**We use logic because it is clear.**

(says the same thing, but no more reference to sakes or clarity)

A black and white portrait of Bertrand Russell, an elderly man with white hair, wearing a suit and tie. He is looking slightly to the right of the camera with a serious expression. The background is dark on the left and light on the right.

# **Bertrand Russell's Theory of Descriptions**

# RUSSELL'S INFLUENTIAL IDEA: **GRAMMATICAL VS. LOGICAL FORM**

- The surface structure of a sentence may mislead us as to its underlying “logical form”.
- The structure relevant to the way word meanings combine into sentence meanings is logical form, not surface structure.
- Part of the job of a philosopher/linguist is to discover the underlying logical forms of sentences.
- This is not only required to do semantics, it can help dispel other philosophical confusions.

# **RUSSELL'S THEORY OF DESCRIPTIONS**

A method for translating/paraphrasing sentences that contain definite descriptions

The present king of France is bald.

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The present king of France is bald.

$$\exists x((Kx \wedge Bx) \wedge \forall y(Ky \supset y=x))$$

# RUSSELL'S THEORY OF DESCRIPTIONS

A method for translating/paraphrasing sentences that contain definite descriptions

The present king of France is bald.

$$\exists x((Kx \wedge Bx) \wedge \forall y(Ky \supset y=x))$$

There exists an  $x$  such that:

$x$  is presently King of France

$x$  is bald.

there is no present King of France other than  $x$

# RUSSELL'S DESCRIPTIVISM ABOUT NAMES

(A method for turning names into descriptions.)

“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.”

—Russell, *The Problems of Philosophy*, ch.5

# QUINE'S METHOD AT WORK

Santa Claus doesn't exist.

↓ (descriptivism about names)

The guy who lives at the north pole and delivers xmas presents doesn't exist.

↓ (Russell's theory of descriptions)

$$\neg \exists x((Nx \wedge Px) \wedge \forall y((Ny \wedge Py) \supset y=x))$$

There does not exist an  $x$  such that:  
 $x$  lives at the north pole and delivers xmas presents  
(and is the only one who does these things).

## EXERCISE 1.2

# Finding Ontological Commitments

Regiment the following sentences into the language of first-order predicate logic. Determine what Quine would say you would be ontologically committed to, were you to accept the following sentences as true:

1. Some donuts have pink sprinkles.
  - a. donuts
  - b. sprinkles
  - c. pinkness
  - d. both a and b
  - e. all of the above.
  
2. All donuts have pink sprinkles.
  - a. donuts
  - b. sprinkles
  - c. pink sprinkles
  - d. all of the above
  - e. none of the above.
  
3. Some donuts contain holes.
  - a. donuts
  - b. holes
  - c. perforated donuts
  - d. all of the above
  - e. none of the above.

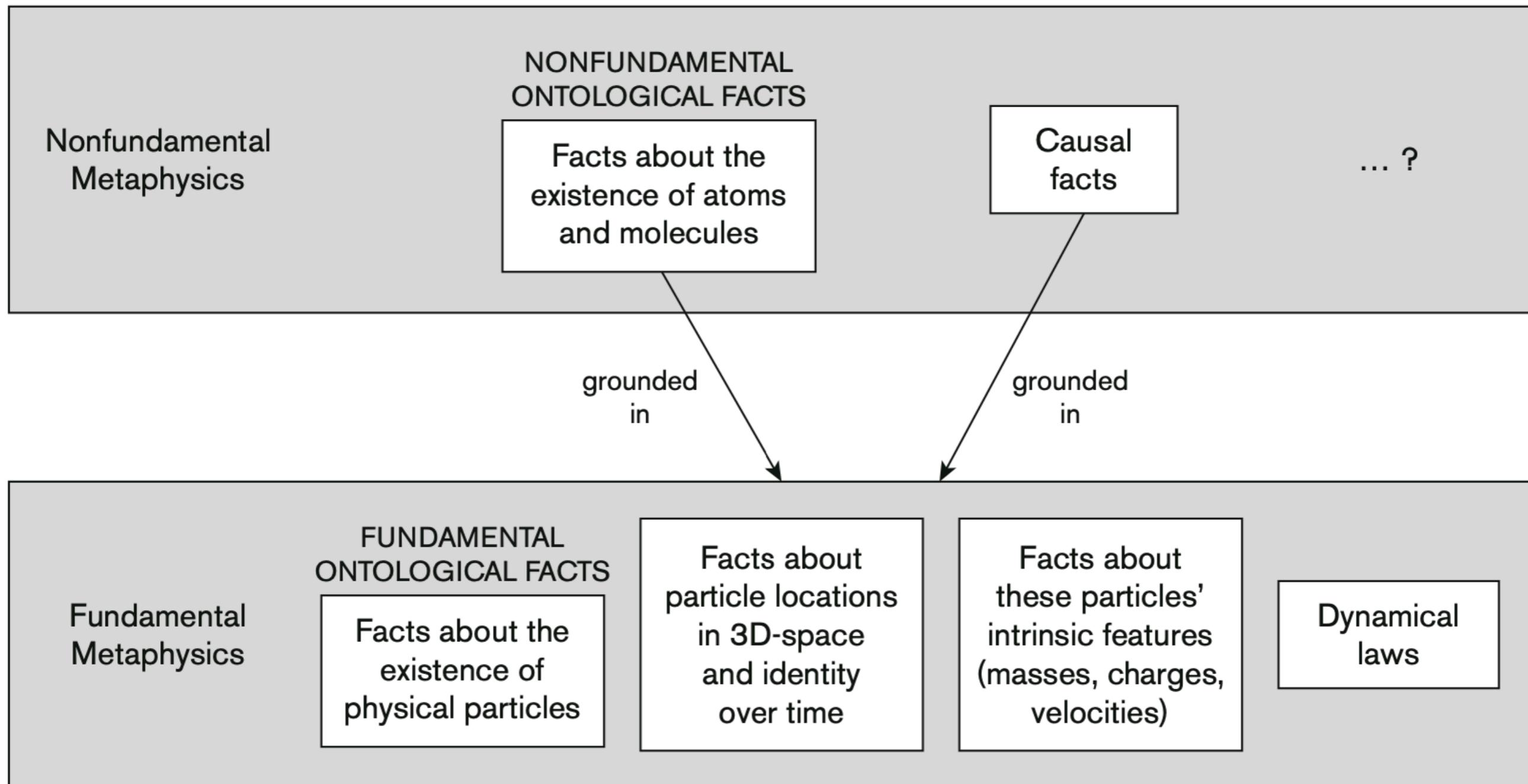
## **Quine on Abstract Entities and Ockham's Razor**

For the cross-fertile example for Quine's loophole, I do not think that 'species' itself is just an abstract entity, but more of just a general term for groupings of many groups of similar animals. —Ariel Ortega

Why is Quine skeptical of abstract entities? —Rahman Shah

I feel like you would also have to say that 'animals' is an abstract entity and would need to be paraphrased to fully exist. I am also not sure if Ockham's Razor is meant to tell us that we should only prefer or devise theories that go by a sparse ontology? —Ariel Ortega

**FUNDAMENTALITY,  
GROUNDING,  
AND  
ONTOLOGICAL DEPENDENCE**



**Figure 1.3** Fundamental and Nonfundamental Metaphysics: A Toy Theory

# ONTOLOGICAL DEPENDENCE

**Mereological relations:**  
part/whole relations.

**Realization:** one object or objects realize another when the former plays the role of implementing the latter, e.g. when some hardware components implement a particular program.

**Supervenience:** one set of facts about a class of entities (the As) supervenes on another set of facts about a class of entities (the Bs) when there can be no change in the A-facts without a corresponding change in the B-facts.



Elizabeth Barnes

## **EXERCISE 1.4**

# Relations of Ontological Dependence

Which if any of the three kinds of ontological dependence relation would you argue obtains in the cases below – a mereological (part/whole) relation, realization relation, a supervenience relation:

- A. A collection of buildings, students, and faculty on the one hand, and a university on the other.
- B. The physical facts about a murder and facts about its moral status (as being wrong or morally justified).
- C. Cells and a human liver.

## **A fun loose-end question**

The example of questioning the existence of Santa Claus is used to highlight how Santa is not real despite for there being a general understanding behind the meaning of the word and its concept. So what would happen if Santa is embodied by ... hundreds or thousands of men during Christmas? Would the embodiment of Santa by those men make Santa real? To be Santa is to be a jolly old man with a beard who brings presents to good children. When that universal understanding of Santa comes to life, or is embodied, would that make the notion that Santa does exist true? —Raima Zaman

**Compare:** You think you're getting married to someone and later discover that this one person was really triplets! Are you married to one of them? All three?