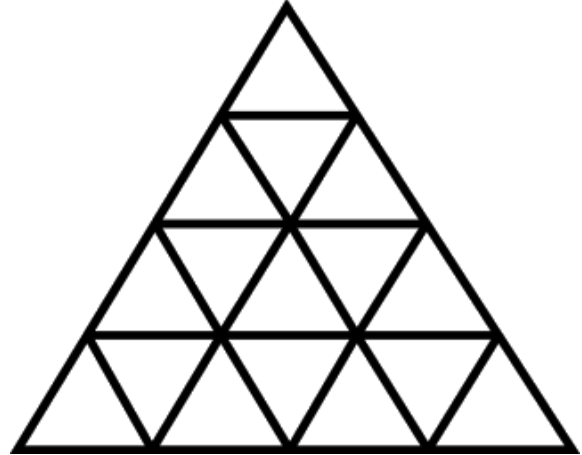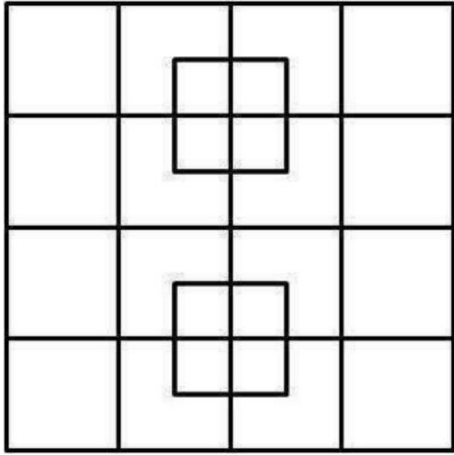# Composition

1. Composition: Brain Teaser: How many squares do you see in the picture on the left? How many triangles in the picture on the right?   (Answers are on the last page)

Question: Did you say that there were some bigger triangles COMPOSED of littler ones?

If so, then you have made the assumption that bigger things can be composed of littler things. But, that's a pretty big assumption. But, it is one that we assume every day. In this course, we have already assumed that some planks of wood can compose a ship, or some atoms can compose a statue, and so on. The question we will ask today is:

The Special Composition Question: When do some things compose another?

Peter van Inwagen words it this way:

Suppose one had certain non-overlapping material objects, the xs, at one's disposal; what would one have to do—what *could* one do—to get the xs to compose something? (23)

There are only three possible answers to this question:

Possible Answers
(1) The xs **never** compose something. There is no such thing as composition.
(2) The xs **always** compose something. EVERY collection of xs is an object.
(3) The xs **sometimes** compose something, but not always.

Option 3 (the moderate position in between the two extremes) is clearly the most intuitive. But, let's start by looking at the extreme answers.

2. Mereological Nihilism: Option (1) says that xs NEVER compose a y. This is '**nihilism**' about composition: The only things that exist are 'simples'.

Simple: A simple is an object which has no proper parts.

Proper Part: A proper part of something is a part that is SMALLER than the whole. (*We have to clarify this because technically, even a WHOLE thing is a part of itself*)

Merelogical nihilism says that there are no composite objects at all. So, there are really no such things as tables, trees, planets, cars, etc. That's pretty counter-intuitive.

Problem: But, what if there *is* no smallest, indivisible, partless, "simple" entity? Scientists once thought that atoms were indivisible—the smallest, most fundamental material things in existence. But, then we discovered protons, neutrons, and electrons. Later, we discovered that even THESE were composed of still smaller particles (quarks). What if it is just smaller parts ALL THE WAY DOWN? Then there ARE NO smallest particles. But, then, NOTHING EXISTS!? That is incoherent. Surely, the fact of the matter about whether or not something exists should not turn on the question of whether or not there non-composite, part-less "simples".

3. Mereological Universalism: The other extreme option was that ANY collection of xs ALWAYS composes a y. This is '**universalism**' about composition: Any and every collection of objects is itself an object.

On this view, we would get the result that there are far more composite objects than we thought there were. For instance, there would even be an object composed of the fleas on the fattest dog in Scotland and the Statue of Liberty (call this object '**Fleabert**').

The result is that there are a LOT of wacky "things" in the universe. The Moon, the top half of the Statue of Liberty, and my right arm compose an object. So do the front half of this trout, and the back half of this turkey:

The undetached trout head and the undetached turkey tail compose a **trout-turkey**! But, that is absurd. Surely there are no such things as trout-turkeys, or Fleabert! (*It would also be impossible for there to be exactly 2 material objects on this view. Do you see why?*)

4. The Moderate View: Clearly, the intuitive view is that composition only SOMETIMES happens. That is, there are at least SOME composite objects that exist (some good candidates seem to be ships, statues, tables, trees, etc.); but, not just ANY old collection of parts composes an object (i.e., Fleabert and Trout-Turkey do not seem to be objects).

So, let's look at some suggestions for how composition would only SOMETIMES occur:

Contact: Some xs compose a y if and only if the xs are in contact.

To get some xs to compose an object, one merely has to make them TOUCH.

Rules out weird objects: On this view Fleabert and Trout-Turkey do not exist. For, the fleas, the Statue of Liberty, the trout, the turkey: None of these things are in contact.

Allows intuitive objects: On this view, ships exist (because all of the planks of wood are touching), and statues exist (because all of the clay is touching), and so on.

But too broad: Yet, intuitively, often things that touch do NOT compose a single object. If we **shake hands**, do we briefly become a single thing!? My plate is on the table, and my food on the plate. Do the **food, plate, and table** become ONE THING? Surely not. So, here's a better suggestion:

Fastening: Some xs compose a y if and only if the xs are in contact and fastened together such that they are not easily pulled apart. (*for instance, some Legos composing a robot, or the parts of a car fastened together by bolts and screws*)

Still too broad: But, then, the following are single objects: A tangle of hangers, a rope tied to a person, a wad of gum stuck to your shoe, or even you and I shaking hands while intertwining our fingers together, and so on. Let's give it another shot:

Cohesion: Some xs compose a y if and only if the xs are in contact such that they cannot be pulled apart without breaking. (*for instance, adding mortar between bricks to "glue" them together, or welding two pipes together, etc.*)

Still too broad: But, then, the following are single objects: a dog and the sidewalk if the dog stands there while the fresh cement dries, or even you and I if we shake hands with super-glue all over our hands, and so on. A final attempt:

Fusion: Some xs compose a y if and only if the xs are in contact such that they have fused together and it is no longer clear where the boundaries of the parts are (i.e., there is no obvious place where one part ends and the next part begins).

Still too broad: Van Inwagen rejects this proposal too, claiming that if a doctor stitched two twins together and the stitches healed to be undetectable (creating artificial Siamese twins), they would not compose a single object, even though they are now fused. (*Is that right? Can you think of a better counter-example to Fusion?*)

Also too narrow?: It seems that at least SOME things are composed of objects that are NOT touching. **The Solar System** seem to be a thing, but none of the planets or the Sun are touching. A **deck of cards** still seems to be a thing, even if the individual cards are scattered across the floor. **Atoms** seem to be things, but their electrons never touch their nuclei. In fact, strictly speaking, physicists tell us that **NO two objects EVER touch**! (*What you perceive as touching is merely electrons repelling one another without coming into contact!*) Furthermore, each of the revisions seems to have trouble with at least one or all of these scattered object examples. Argh!

5. A Final Proposal: Perhaps, van Inwagen suggests, the appropriate relation that binds objects together into larger ones is a CAUSAL one? In a later writing, van Inwagen suggests that, at the very least, LIVING THINGS exist. So, he proposes this:

> **Life:** Some xs compose a y if and only if the activity of the xs constitutes a life.

Intuitively, you are a SINGLE living thing. On the Life proposal, because of this you are also an object, even though you are composed of smaller parts. And so too for trees, cats, whales, and so on. (*Alternatively, Trenton Merricks has proposed that only PERSONS are composite objects.*)

A Possible Proof? Surely, if there is one thing that you know for sure, it is that YOU are something. But, YOU seem to be a composite object. That is, you have PARTS. If we are certain of our own existence, this might be grounds for rejecting the extreme views:

1. I exist.
2. I am not a mereological 'simple' (i.e., I am a composite object).
3. Therefore, *nihilism is false*.

Furthermore,

4. I was once ten (i.e., I am numerically identical to some past ten-year-old).
5. That ten-year-old and I are composed of different parts.
6. But, then, universalism entails that this past ten-year-old and I are NOT numerically one and the same object (since we have different parts).
7. Therefore, *universalism is false*.

If this is right, then the moderate view is correct: At least SOME groups of xs compose objects, and at least SOME groups of xs do NOT compose objects.

But, what of non-living things? Aren't tables, chairs, and cars THINGS? (*or, trees?*)

Van Inwagen has an interesting response: He says that, strictly speaking, he rejects the existence of inanimate objects such as tables and chairs. However, we might still be able to capture our intuitions about such things. He says that, when you look at what you THINK is a chair, all you are really looking at is a huge number of tiny objects—simples, or quarks, or atoms, or whatever. But, we might still describe chairs in the following way:

A chair is: Some xs arranged 'chairwise'.

Inanimate objects are nothing more than a lot of tiny objects ARRANGED in certain ways. There are no CHAIRS in this room, but there are lots of instances of some xs arranged chairwise. (*Is this plausible?*)
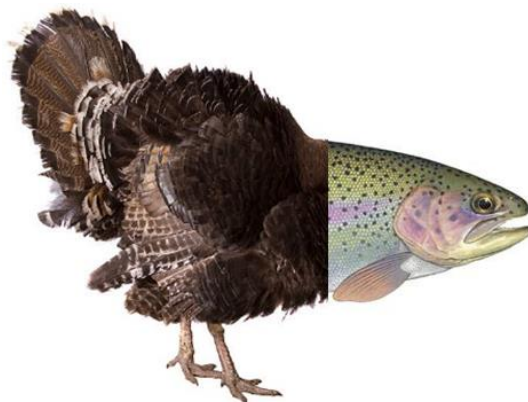
(Answers from page 1: How many squares? 40 ; How many triangles? 27   …That is, if composite objects exist)