

Second Philosophy

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Title	What is Substance Made of?
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INTRODUCTION

Substance definitions:

- a fundamental or characteristic part or quality
- ultimate reality that underlies all outward manifestations and change

Merriam-Webster Matter definitions:

- the substance of which a physical object is composed
- material substance that occupies space, has mass, and is composed predominantly of atoms consisting of protons, neutrons, and electrons, that constitutes the observable universe, and that is interconvertible with energy
- the indeterminate subject of reality ; especially : the element in the universe that undergoes formation and alteration

Matter seems to exist in space-time. That is matter is extended in space and endures in time. Consider a thing in space-time - a bicycle say. We can ask about the bicycle "what is it made of?" And there are many ways to answer that question. We could speak of the parts - wheels, frame, pedals, seat, handlebars, brakes, etc.

And we notice a thing right away - the things that a bicycle is made of are not themselves bicycles. We also notice that many of the parts are made of subparts like the wheels, but that some are not made of subparts. The handlebar is a part with no subparts. And you can take parts with subparts apart until you get subparts that have no subparts. Like spokes

What is something with no subparts made of? Things with no subparts are made of some sort of material - like say steel, or titanium. So - what is the material made of? Material is made of atoms of various sorts.

We can pause again to notice an interesting thing. When looking at things on the scale of bicycles there is an unlimited number of things that the material can make. When looking at the level of material there are far fewer materials than there are things. And when we look at atoms, there are fewer different atoms than different materials. (120 or so last time I looked.)

We can further ask what atoms are made of. The pattern repeats; atoms are made of things that are not atoms. The things that make up atoms are fewer in number than the number of kinds of atoms. Some of the things that make up atoms have subparts (i.e. protons are made of quarks) but other parts don't (electrons).

At each level we have been the objects of our consideration has had both parts and properties. But when we get down to lower levels we end up with just properties. An electron or a proton can be looked at that way. For purposes of working with them we don't need to ask what they are made of. We need only to ask what their properties are. Of course - we can also treat bicycles that way - we don't need to ask what a bicycles is made of. We can instead just ask what its properties are. We have also seen that a thing is not made of itself - it is made of something else.

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What do we expect to find when we get to the bottom of our "made of" ladder. Currently we seem to be approaching the bottom of that ladder in science. We have theories now about what quarks (for instance) are made of. One theory is that quarks are made of strings. And what is a string made of? Well strings seem to be on-going changes in the topology of space-time. And what is space-time made of? Well - maybe it's not made of anything.

Maybe it just exists.

This causes a shift away from our original seeming that a bicycle exists in space-time. Instead we see that a bicycle is made of space-time and that there are many perspectives from which space-time can be viewed. Of course - if that is so, then the bicycle just exists too. Each step of the ladder is shown to be just different perspectives that reveal different patterns. But all the perspectives look at the same thing - something that exists.

What can we say of space-time other than that it exists? We can also say that space-time changes in particular ways. For instance, it seems that if we take string theory seriously then the change is in the topological properties of each region. It also seems that the state of one region both affects and is affected by the states of a neighbouring regions.

The interesting thing here is that when we get to the bottom of our ladder we find that material substance is something about which we can say nothing other than that it changes. We have talked about substance seen from various perspectives.

We looked at a bike, a handlebar, an atom, a quark, a string - and found at the base changing space-time. It seems to me that all of the levels in this ladder are equally real and equally fundamental. A bicycle is not just parts. A bicycle is more than the sum of its parts.

QUESTIONS:

1. If something is more than the sum of its parts how do we characterize that "more"?
2. Is it a cop out to not ask what space-time is made of? Or is it a logical necessity that when we get to the bottom of the "made of ladder" that we find something that just is?
3. Can we forget about reductionism if none of the levels of reality is more fundamental than any of the others?

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DISCUSSION:

Birric: Bicycles are made from bicycles

Skeezix: Did you want to refer to Aristotelian substance, Sim?

Renald: Sim, is a bicycle AS a bicycle as fundamentally real as an atom, quark, etc?

Birric: At the fundamental level matter is made from anything. If you have small enough a time interval, you can make a bicycle appear

Simulat: I disagree Birric - the things that a bike is made of are not themselves bikes

Shingles: In answer to question 1) The communication between the parts makes a more intricate, larger more complex Part

Simulat: I think so Renald

Renald: Then, Sim... is a bicycle AS a bicycle real in the same way a molecule is AS a molecule?

Birric: The universe is made from mind/spirit - thus the bicycle nature of basic matter is necessary in order to create bicycles at the macro level

Simulat: communication Shingles?

Shingles: communication may be read as interaction

TruNimrod: But even a bicycle is not a bicycle by itself, it's a bicycle for us, it's a concept

Renald: Because it seems to me that the reality of bicycles, even bicycle parts, is special...exactly, Nimrod

Thoth thinks, 'context. It's all context...all the way down.'

Simulat: sure - you need to have a mind before you can perceive reality in any way

Birric: Shingles actually is right, that communication also must be of bicycle nature in order to make a bicycle

Simulat: but that doesn't mean that a mind creates reality

Renald: Yes, Thoth... the question is, do the contexts mesh? Must they?

Shingles: Even the bicycle parts are themselves larger more complex groups of smaller parts, the communications of which give the larger part its properties

Skeezix: I think we have been misled into believing that objects have some permanent existence. Current cosmology suggests that everything started out as hydrogen & helium, and under various forces became the rest of the elements.

TruNimrod: Maybe Spinoza was right, there is only one substance, we only perceive properties of that substance

Thoth: they must if they are real, Ren. That is the test for 'truth' or reality....

Piper: But where does the hydrogen and helium come from, Skeezix?

Birric: No, reality creates minds and thus reality creates bicycles - the bicycles are contained prior in reality

Renald: Thoth... is there just one?

Thoth: of course not...

Simulat: Skeezix - who says that objects have permanent existence?

Skeezix: The hydrogen & helium were the matter that emerged from the big bang, along with the various forms of energy.

Shingles: or that bicycles have always been possible, but time has given them manifestations

Skeezix: Does Dark Matter have substance, even though we only know it exists because of its gravitational effects?

Birric: So the idea that bicycles are not fundamentally made from bicycles is plainly wrong and refutable

Thoth: there are as many contexts as there are relationships between entities in the world. They can subsume, be subsumed by, intersect with, or be isolated from each other.

TruNimrod: Maybe there is only one substance, you may call it energy, at the end, bicycles, atoms, quarks, all are made of energy

Renald: Sim, rather than saying a mind creates reality; would you consider that there are realities that are mental? Or social?

Piper: Everything has to be taken further back until you have nothing....that is why conversations like this never make sense to me.

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Shingles: yes, it must do or Dark matter would not exist, Skeezix

Thoth: but if one appears to preclude another, then u have a problem - either missing information or false information.

Skeezix: I thought that it was in some way implied in your description of the atomic table.

Simulat: Skeezix - seems to me that dark matter would much like a bicycle - a manifestation of space-time that is seen from a certain perspective

Renald: Thoth, that does seem to suggest a requirement that there be only one, though. And I'm not pointing this out because that's my position, but rather the opposite.

Simulat: yes Renald - but I'm talking here about physical reality

Oswy: I think I agree with Thoth for a change. I prefer to use the word perspectives. For instance, if you take the physicalist perspectives I suppose you are led eventually to the idea of strings as fundamental unchanging that beyond which no description can go. However there are may other perspectives to describe the fundamental and unchanging.

Shingles: We would all then be Manifestations of Space-time, or is Substance something separate to Space-time?

Skeezix: Do photons have substance, since they have no mass, but can en masse produce pressure in the direction that they are moving?

Renald: Sim, I understand. I just don't think a bicycle AS a bicycle is primarily physical

Thoth: one "super supercontext", Ren. That'd be the universe itself.

Shingles: I would say that Substance can be energy or matter, Skeezix

TruNimrod: photons have energy

Birric: The nature of space-time is that it creates virtual particles

Thoth: but it is just the set of all other contexts.

TruNimrod: and energy can become in matter

Birric: Virtual particles appear exactly with the same laws which underlie the universe

Skeezix: (Shit. It's snowing here.)

Simulat: I might say that matter like steel is a substance - but that atoms aren't - they are what make the substance - and that what something is made of is not the something

Renald: Right, Thoth. And the contents of this "super supercontext" must mesh?

Birric: In fact, they create the laws we see

Skeezix: Shingles, then what is the difference between "substance" and "process"?

Thoth: they'd seem to by definition, in some way, Ren, no?

Shingles: but capital S Substance is different to a specific substance, Sim

Renald: Thoth... by one definition, sure :-)

Thoth: some may 'appear' not to, but in such cases that's a clue to look closer. Something is misunderstood, left out, or wrong.

Shingles: great question. I would say that the difference comes from which precepts you make your observations from, Skeezix

Simulat: sure Shingles - but I prefer to just speak of space-time rather than capital S Substance - I think it's clearer

Skeezix: So, Simulat, do you draw the line between Atoms & Molecules, and if so, Why?

Renald: Thoth yes, that's the scientific definition, which is a very useful one.

TruNimrod: Simulat, you are trying to make a conceptual explanation of substance, and some of us a causal explanation, maybe that's why there's no agreement

Thoth: e.g. contexts that don't mesh are what are called 'paradoxes', no? ;o)

Renald: Only if one tries to reconcile, or collocate them.

Thoth: Skeez, different level of organization/structure.

Shingles: Are Substance and Space-time different things, Sim?

Simulat: Skeezix - molecules are made of atoms, and molecules and atoms have different properties - but they are very similar

Birric: That's a semantic fallacy, that what makes something cannot be that something. Already Democritus used

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for his atomic theory as proof the fact that bread smelled of bread. So there must be particles floating around that are bread that make up the bread. In a larger context, at the bottom, the virtualities that make up bicycles and anything may well be virtual bicycles and anything which appear with the same logic with which the world at large is appearing - well, that may be a bit too deep, but I said it anyway

Simulat: not in my view Shingles

Shingles: ok

Skeezix: In what way is it useful to have a conversation over matters that eventually break down into arbitrary word definitions?

Simulat: Birric - I think that it's Democritus who speaks a fallacy

Oswy: Trunimrod, I agree with you and I think you are exploring another perspective. Suppose we define bicycle as two wheeled machine for transport purposes. Then this concept is fundamental. It can have predicates but is not itself a predicate of other things. It allows us to pick out features of space-time. It thus has elements of substance.

Skeezix: It would be a rare fellow who could make a meal of the smell of bread.

Birric: He's right about bread - and I am asserting it about virtual particles

Shingles: Because thought and words have their own resonance, even a vibration at a physical level. So it is always significant to consider the meaning of the words or symbols we use to describe reality, Skeezix

Renald: Oswy... what does a two-wheeled machine for transport -- an artefact -- have to do directly with spacetime?

Simulat: Birric - you can break bread into crumbs - but the crumbs are made of atoms, and the atoms aren't bread

Skeezix: Simulat, your introduction traced substance down to subatomic particles. Why are you now excluding them from the definition?

Renald: Only because bread is a mixture.

Oswy: Ren, it can exist in space-time

TruNimrod: you are talking about virtual particles, you are talking about another substance, I think you are in a categorical mistake

Simulat: Skeezix - I thought I was saying that there are many different perspectives from which we can view spacetime - and that matter - or substance - is just one perspective

TruNimrod: you are talking of a substance that defines another substance

Renald: Os, yes. But its being AS an artefact doesn't seem to fit the traditional scientific spectrum of composition. Its being seems dependent, from that view, rather than fundamental.

Simulat: I think that that way of expressing it gets too convoluted Tru - it just makes things harder to understand not easier

TruNimrod: it's the Cartesian mistake of Descartes trying to explain the mind causation over the body

Birric: Bread was only a metaphor. Virtual particles are "real" - though that seems a contradiction in terms

Skeezix: Shingles, I think the primary reason to discuss definitions is to set the ground rules before a discussion. Turning a discussion into one only of definition is simply modeling the bowl, not eating the soup.

Skeezix: Is there a particle physicist in the room?

Renald: Is there a room?

Skeezix: Don't start, Renald ;-)

Oswy: Ren, that's the whole point. If you want to use I hate to go back to this a reductionist scientific perspective then you will be led eventually to something like strings at last that's as far as we are at the moment in this paradigm. My point is that there are other perspectives to that can be used to explain substance in reality.

Shingles: But you see how you're constructing that metaphor, that's precisely what I mean, considering the meanings changes the thought patterns, or altering the resonance (which is physical) Skeez

Renald: Oswy, I'd be delighted to have this whole point elaborated. :-)

Simulat: I agree with you there Oswy

Renald: And I don't disagree... there just seems to be something missing.

TruNimrod: Simulat, what I try to say it's that if you have real particles, and virtual particles, they have different substances; you can't define one in terms of the other; that would be a categorical mistake

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Simulat: I point out that when you look at the level of strings, then you have no information about the level of bicycles

Oswy: Ren, I don't want to re-debate the several arguments I have had here about scientific reductionism. I simply say it's not the only way of explaining reality its one way.

Shingles: but maybe you would have information on the notes the strings play

Simulat: virtual particles are real particles that don't last long - not long enough to have any effect

Renald: Sim, I point out that if you look at the level of bicycles without accounting for the mental, the social, the human, you still don't have information about the level of bicycles AS bicycles. You have at best, odd structures of chemical substances.

Skeezix: But is the physical change brought about by this discussion any greater (or lesser) than scratching an itch to change the sensation or turning over in our sleep??

Birric: Breaking things down vertically creates an ILLUSION of reductionism. In fact, the particles at the bottom are not real and are directly part, horizontally, of everything else in the universe, as the experiments with coupled particles show. Things are not "real" until they are observed. So chasing after strings and stuff is a fool's errand

TruNimrod: Simulat, so, why the distinction?

Simulat: yes of course Renald - but that odd structure has its own properties

Birric: Of course virtual particles have an effect. They create the locality in fields

Oswy: I agree Sim yet the idea of a bicycle as an object with predicates yet not being a predicate of other things in other words a particular makes perfect sense.

Renald: Those properties are not those of a bicycle.

Shingles: No, it wouldn't be, but when you add that small alteration to the rest of the stream of resonation, its ripples are unanticipated and far reaching, Skeez

Skeezix: Is a bicycle the same substance for a 14-year-old lad as it is for an 80-year-old amputee?

Simulat: sure they are Ren - it will roll like a bicycle and a robot (say) could ride it, even if the robot had no concept of what it was

Skeezix: They would look at it entirely differently.

Simulat: sure Skeezix - the bicycle has parts made of metal for both - same substance - but it also has different implications for the boy and the amputee

Oswy: Skeezix. One would not conceptualise it with two wheels and another with three. They would conceptualise it in the same way,

Renald: Well, to be picky, Sim, a bicycle will only roll when ridden by someone/thing that's capable of riding it, otherwise it will fall over. But I don't want to get picky, and you could pick any artefact, some of which do actually just do what they're made to do.

Skeezix: So is metal & rubber the only thing that matters about a Bicycle? What makes it different, then from a Tonka Truck?

Birric: The logic of a bicycle, the logic of its concept as well as the totality of its material composition, must exist in the universe. Otherwise it could not exist at all

Renald: No argument there, Birric

Skeezix: The LOGIC of a bicycle?

Simulat: True - virtual particles are particles that are said to pop in and out of existence in the vacuum - they cancel each other out before they can have any effect - and because of that they don't violate the conservation of mass/energy - and they are called virtual to distinguish them from particles that hang around longer

Birric: Well, Skee, it's my assertion that illogical and impossible things are also virtually impossible. It's actually a very powerful idea which clears up a lot of confusion in QM

Oswy: Skeezix. There could be a form of bicycle in a Platonic scene. Such things could be the ultimate substances. From the perspective of forms.

Thoth: and they do not participate in any real way in building our reality.

Simulat: Skeezix - the parts of a bicycle have different forms from the parts of Tonka truck - and the different forms gives each a different set of properties - but both do roll, so they are similar that way

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Shingles: fascinating, Birric

Birric: Well, there are coercive constraints on our reality - and where else should they come from but from the lawfulness of virtuality?

Skeezix: That's the part that I think that Plato really missed the boat on. Birric, I'm going to assume that the term LOGIC in QM is not defined the same as in normal conversation.

TruNimrod: I'm very confused, we don't have a definition of substance, I think there is a mistake in the question Simulat asks: "what is substance made of?" I ask, things are not made of substance? Substance is what things are made of; if you ask for the constituents of substance you will have to postulate another substance ad infinitum

Birric: Well, yes, Skee. I use it for lack of another term. I mean to say with it that only such things are possible which are possible

Shingles: brilliant

Skeezix: Sounds like a tautology to me.

Thoth: things are 'made' of the relationships between the things of which they are made up, I think, Tru...

Birric: So a bicycle that moves with the wheels rolling in different direction is not as likely as a virtual product as a real bicycle - just as it is not very likely in our reality - even if it could be made

Thoth: when u get down to it, properties, cause, space, time - really just different sorts of relationships.

TruNimrod: I agree with you Thoth, it's a Wittgenstein like answer

Simulat: sure Tru - but I did try to indicate that substance is just one level - one perspective on spacetime - and I have resisted the idea that substance is made of other substance - we already have good words to use for all the levels - ie, parts, material, atoms, quarks, strings, spacetime

Skeezix: Yeah, the laws of friction kind of predict that

Birric: To say it more strictly, if you create the short time and small space which might create virtual bicycles, then you get just as few bum bicycles as in the real world

Shingles: different instruments playing the same music

Oswy: TruNimrod. I have a piece of paper in front of me on which are written about eight definitions of substance. I don't think we are going to get to an agreed idea that covers every outlook. Except in the sense that the concept is about fundamentals and persistent qualities something of that sort.

Renald: Sim, I guess my curiosity revolves around this. A bicycle is an artefact that depends on an idea. So aside from the chemical substances necessary to manifest it, it is NOT a particularly physical entity. So if it's reality, whose physicality is only a special case, is as fundamental as more purely physical entities, what about entities which are more purely mental or social? Are ideas real the same way? Are languages, for instance? Or personalities? Or customs?

TruNimrod: then we totally agree Simulat, I was only confused

Thoth: the meaning of 'substance' is context-dependent, Os. ;o)

Skeezix: That makes sense, Thoth

Shingles: wouldn't substance then be 'the quality of existent things'?

Simulat: I agree with you Renald - but I'm trying to discuss physical reality here - not a Heideggerian "world"

Simulat: if the discussion gets too broad then it's impossible to make any sense at all

Birric: We are enspirituated matter - so yes, those concepts are real

Thoth: does to me, anyway, Skeez. For me, looking at things that way offers power and flexibility that is not available using many other 'theories' or approaches.

Renald: I understand, Sim, but your original questions escape that limit. ;-)

Simulat: Well . . . :-)

Shingles: If we go broad enough, we might come to see that everything is unified

Birric: We are the way the universe sees, tastes, feels itself, so our concepts are the color, taste, feel of the universe

Thoth: and also makes it easier to find where things make sense - or don't - and helps one understand 'why?'

Simulat: Shingles - we already see that it is unified because it is all spacetime

Renald: And if the original questions are not understood to escape that limit, that demonstrates precisely the trouble the questions may be trying to dismiss.

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Thoth: or the trouble with the questions.

Skeezix: Birric, that's only true if we're the only life form

Shingles: ah, do excuse me for stating the obvious

Birric: It's true for ALL life forms, Skee

Birric: The universe may well have flavors we haven't tasted (yet) - maybe that causes all that confusion about concepts

Skeezix: Then I agree. I've seen too many people refer to human beings as being special because we care about things like stars & atoms.

Shingles: The Animal that echoes the Logos...

Skeezix: Well, our taste buds evolved on earth. We may not have a taste (or other perception abilities) that wouldn't have allowed us to evolve to this point.

Simulat: Ren - here are my 3 questions - I don't see how they violate the logic of my discussion

Simulat:

1. If something is more than the sum of its parts how do we characterize that "more"?
2. Is it a cop out to not ask what spacetime is made of? Or is it a logical necessity that when we get to the bottom of the "made of ladder" that we find something that just is?
3. Can we forget about reductionism if none of the levels of reality is more fundamental than any of the others?

Marya: well, we are only special in the sense of having 'probably' the most highly developed brain amongst life on earth - but no more than that, imo

Thoth: we are special and not special, I think, Skee. Not because we are a natural part of the universe, not separate from it. special in that we are local parts of it so organized as to be able to perceive our local surroundings, ourselves, and our perceptions there of. That, to me...is amazing. And perfectly reasonable and understandable. Which just makes it all the MORE amazing.

Marya: yes indeed

Renald: It's #3, Sim

Shingles: The fire that gives birth to Light and Order

Simulat: how are you interpreting that question Renald?

Thoth: so, in a sense, u can say we are local parts of the universe aware of and perceiving itself...from different vantage points.

Thoth: and also able to be active and effective within itself.. at least locally (whether or not u wish to take that as implying the universe is 'alive' or 'self aware' is another line of inquiry). ;o)

Renald: Sim, if none of the "levels of reality" is more fundamental than any of the others, there isn't really any such thing as reductionism. This is why I've been asking the questions I have. Your answers could be summed up to say that some reality is still more real than others. Which is fine, I just hoped to clarify.

Shingles: but the nature of the Universe is heavily related to the awareness of the Universe

Simulat: I don't see how I'm saying that Renald - it seems to me that I'm saying that all levels of reality are just as real

Thoth: that's an important distinction.

Simulat: when you are looking at the level of bicycles, then a bicycle is real

Skeezix: I think Renald has something.

Oswy: Nothing much I disagree with tonight I must be losing my dragon touch. It's all harmoniously Kantian here tonight.

Simulat: but you don't see atoms

Renald: Sim, you are saying exactly that. What's unsaid is what qualifies as a level of reality.

Skeezix: The fact that we don't see atoms says more about our eyes than about atoms.

Thoth: no, Ren, I am not sure that's quite what he is saying.

Simulat: when you look at the level of atoms, then the atoms are real, but you can't see the bicycle

Shingles: Kant? blergh...

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Thoth: I make a house of bricks... is the house any less real than the bricks?

Renald: Sim, let's set the bicycle aside for the moment... and talk about a horse. Or we can follow Thoth. It goes the same place.

Oswy: Aristotle liked horses did he bet on the races?

Thoth: but my way makes sense while dispensing with silly questions, Ren. ;o) seriously though...

Simulat: I have tried to indicate levels of reality Renald by naming them - but the theory of what makes a level of reality comes (for me) from Russell's idea of logical types - which is a long story

Renald makes disapproving clucking noises at Thoth.

Thoth: saying all levels are equally really is not quite the same as saying that none are more fundamental than others. It's a matter of structure, organization. Relationships. context.

Simulat: are you trying to distract me from my point Renald? :-)

Renald: No, Thoth, they aren't necessarily the same... I was hoping to ferret out of they went together in Sim's model.

Thoth: ok

Renald: Sim, I hope not! :-)

Birric: What I am trying to say is that the most fundamental level beneath IS the uppermost level above

Renald: But, you'll agree, won't you, that a horse has parts? etc. Just like a bicycle?

Simulat: well - in a way - but you can take a bike apart and put it together again - you can't do that with a horse

Oswy: Ren it has if you want to be concerned about that ie you might be a vet or a trainer or an artist. You might also be Joe public who sees a horse.

Simulat: but sure, horses have skin and bones, and various organs

Skeezix: When I had surgery, they took me apart and reassembled me.

Renald: Well, yes, Sim, but the re-assemblability of bicycles hasn't been an issue so far.

Oswy: Ren I am losing the point of your point. Neigh

Simulat: Well Skeezix - I'm not sure I'd call cutting me open and making an adjustment the same as taking apart - but I won't quibble about it :-)

Thoth Googles Ren's new word...

Oswy: Aristotle said there were primary substances ie individual horses and secondary substances ie the form of horsiness - does that help any?

Renald: In terms of the pure physicality of the two, the composition of a horse is essentially of the same kind as that of a bicycle -- parts composed of substances composed of atoms composed of particles composed of nothing, right?

Simulat: sure Renald - but it became an issue when you started asking, what is the difference between a bicycle and a horse

Simulat: yes Renald

Thoth: one's a mammal, the other isn't. for one.

Shingles: no bicycles are Crustaceans

Thoth: one's maybe a Schwinn, the other isn't. For another.

Simulat: but even horses are space-time - just like a bike but horses have different properties than bikes

Thoth: exist within space-time, Sim, would be better to say, no? Or not?

Simulat: because of their different structure

Oswy: Sim that's sort of like Spinoza. As someone said before.

Renald: Right... struggling to keep hold of my point... so a horse is pretty purely a physical entity, it can be pretty thoroughly described scientifically, starting with biology, in a way that will not particularly reduce its... horseness?

Simulat: I say are made of space-time

Thoth: so then, you're saying space-time is a substance. The substance.

Simulat: yes Oswy - I saw that earlier but the conversation swept on before I could comment

Oswy: Keep going Ren

Thoth has his doubts, but keeps them to himself for now.

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Simulat: Thoth - my stance is that space-time is space-time - and that substance is at the level of stuff like steel

Renald: And the biology of a horse can be further described in terms of chemistry, the chemistry in terms of physics... these are different "levels of reality" each "fundamental" and equally "real" on its own terms?

Thoth: though I do understand what you mean, I am not sure it's valid/correct to say. But in your view, steel is also space-time.

Oswy: I agree with that Ren

Thoth: so is carbon and iron and oxygen.

Renald: Thanks, Os. :-)

Thoth: and so are protons and electrons and neutrons. And so are quarks and leptons.

Oswy: Ren, is there a problem in saying that what you said sounds reasonable?

Thoth: and gluons and strings.

Simulat: yes Renald - and the horse is just as fundamental as the atoms and chemistry and physics - for instance - to account for why the atoms in a horse move, you need to see that the horse is (say) hungry and is moving towards the oats

Thoth: so, you're saying 'space-time' is 'The Substance' if my logic holds.

Renald: No, Os, I'm happy to be making sense and still have anyone listening. :-) And further, we can go "up" from the horse, can't we? It in turn is part of a herd, perhaps, which is part of an ecology, part of a planet, etc.

Oswy: To be controversial I would say that the mental ie the level of qualitative phenomena and the qualia are just as real and should not be eliminated or reduced. I have been saying that for the past six months.

Simulat: No Thoth - my question in the title was "What is substance made of?" and I made the point that things aren't made of themselves

Thoth: yes Ren. Agree with all of that...in a sense. Works with the context-aware view, anyway. ;o)

Shingles: The Universe is one thing, there are many constituents of that one thing, but substance is what is OF the Universe

Winston: A Horse is more than its parts---Any Horse reduction to substance qualities is to not really talk about Horses any longer, imo

Thoth: well, sim...if you say a horse is made of space-time...

Simulat: yes Winston

Renald: Then, Sim, my curiosity is that bicycles seem to stand at the edge of a kind of detour or loop road in this whole model. And I want to know if the model includes the loop road as equally real and fundamental, or as some kind of phantom mirage -- to be extreme about it.

Thoth: ...then it seems to me you're saying what I said...that substance is made of space-time...

Simulat: that's what I've said Thoth

Thoth: or in essence, substance IS space-time/space-time is substance.

Simulat: look Thoth - you can say that if you want - but I'm saying that substance is space-time looked at from the perspective of steel - a substance that is used to make parts of bicycles

Oswy: Ren your idea seems to be getting closer to Leibniz and monads. he envisaged an infinity of substances. So we have Spinoza = one substance, Descartes=2 possibly three substances, Leibniz- infinite set of substances . Take your pick

Simulat: and I think my way of expressing it is clearer

Thoth: well, Sim, it's not what I 'want' to say - just trying to get straight what you ARE saying, or more exactly, meaning by what u say.

Renald: Oh, I'm a monist, Os... I just don't believe in the stuff. :-)

Thoth: 'show me the moni', eh, Ren?

Renald: heh

Oswy: I used to be a monist now I'm a dualist. On guard you monists

Thoth notes his Occam's Razor is drawn and at the ready....

Renald: hmm

Oswy: Ren, was that a significant hmmm or just an ordinary hmm?

Renald: Oswy, all my hmms are significant!

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Oswy: Well, explain its significance, don't leave all in suspense?

Renald: In this case, I'm reviewing my dissatisfaction with my contributions today :-) I seem to have trouble getting quite clear enough

Renald: Then I'm elated to be in good company.

Oswy: Sim Interesting debate as usual lots to ponder on. I worry that I may be becoming more mystical or is that just more of a super realist? Thanks anyway.

Renald: Sim... are minds as real as brains? Just another way of looking at it?

Oswy: Minds are not brains!!!

Renald laughs

Simulat: nobody said they were Oswy :-)

Simulat: Renald - I think that a mind is something that a brain does

Sojourna: Interesting statement, Sim.

Renald: Is matter something strings do?

Sojourna: Person is something body does.

Simulat: no - matter is another perspective on space-time from strings

Sojourna: just thinking....

Renald: So mind is not another perspective on space-time from brain?

Simulat: sure Sojourna - that makes sense to me

Simulat: well - what is an action Renald - is it made of space-time, or is it a particular way that space-time changes - I think its the latter

Sojourna: Hmm, more thought required on that, but yeah, interesting way of putting it

Birric: This is simply a fallacy. We are deceived by the idea that strings are so incredibly small. That is simply not the case. Strings can be extended over light years

Renald nods at Birric, thinking

Gonzalo: invisible strings???

Gonzalo: thinking

Renald: Sim... what if action is more fundamental?

Gonzalo: ;)

Birric: The wave of a single photon, coming from a very distant star, can be the size of a galaxy

Renald: Or change, I should say. I mean, if space-time isn't made of anything in any way that matters... isn't its being a matter of change, rather than composition?

Simulat: Renald - when I first mentioned space-time it was to point to it as something with an ever changing topology

Renald nods

Renald: But if you follow change up, rather than composition, action would be where it's at, rather than substance.

Simulat: I'd guess you need both Renald - you need to have something that changes if you are going to have change

Renald: Then brains are what minds change, perhaps?

Marya: mmm, Don't agree with that Ren :P

Thoth: brains are what minds break ;o)

Renald shrugs, smiling slightly

Marya: Minds are what the brain 'does' - as Sim has said before I know

Simulat: I'd go the other way Renald - minds are based on the ever changing state of the brain

Thoth: mind 'is' the ever-changing state of the brain, no?

Simulat: sure Thoth

Renald: Then you can't forget about reductionism, my friends. Or, you can, but only by dismissing it, which is fine. :-)

Simulat: why not Renald?

Renald: Because you're relegating mind to a dependent state that is different from the dependence any of the

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other "levels of reality" have upon each other.

Toth: well, Ren...reduction isn't something to be dismissed or forgotten. Just not needed to be considered in certain contexts overmuch (as Oswy says), but...it should never be dismissed or forgotten...or far from hand, shall we say. ;o) Simulat: I don't understand why you think that Renald

Toth: so, I guess I'd be in agreement with you, basically.

Renald: I know you don't understand it, Sim. If I can ever explain it, believe me... I won't hold back.

Simulat: so can you explain?

Toth: I don't think sim means to dismiss reduction, Ren.

Renald: Not yet, apparently.

Toth: but to use a bike, you don't need to worry about it while using it.

Renald: It's not reduction itself, there I'm being unclear. It's the accusation of reductionism, or the argument that it represents a problem.

Toth: unless, of course, some part of it breaks. ;o)

Winston: Why is it assumed that Minds are the only part of reality that lacks the ability to cause change?

Simulat: Toth - I think that reductionism involves picking out one level and saying that that level is the fundamental one - for instance saying that a mind is really just a brain - but I don't do that - I think that all levels are just as fundamental

Toth: well, the argument that it represents a problem, I think, is usually made by those who don't apply it right, or feel those who do do so exclusively... and it's a bit of a red herring.

Renald: How is saying a mind is just a brain's activity different than saying a mind is just brain?

Simulat: basically, reductionism is a pejorative cast on people who think that the universe is space-time, with no things like souls involved

Toth: yes. Or it is used pejoratively.

Simulat: and I do say there are no souls - but I don't think that is being reductionist

Toth: but such who use it that way, sim, usually fall into the categories I mentioned. One or both. Mainly, because it undermines their own 'world view'.

Renald: Sim, considered purely physically, there are no bicycles involved either.

Marya: Winston, it could be that 'mind' is something that is perceived as something 'higher', something generally perceived as non physical and yet still is supposed to be able to act in the world (which imo, is not correct) But what else did you have in mind?

Simulat: Renald - you can have brains that don't do what's required to have a mind - a dead brain that is rotting is undergoing change - but that change doesn't produce a mind

Renald: Yes... So, that makes it worse, actually... mind is less than just a brain... excellent. :-)

Winston: A loop might be occurring. A Mind that can collapse a wave function has some effect on reality.

Winston: The highest and lowest might be co-occurring

Toth: a brain is a system; when it ceases to function as a system, or functions improperly no mind, or a 'distorted' mind, is produced.

Renald nods at Toth

Marya: would it not be a 'brain' that collapses a wave function Winston? The action of the brain and not a disembodied mind? (Though I admit I don't know what you mean by a mind collapsing a wave function)

Simulat: I go back to my assertion that a mind is what a brain does - it's an action - not a thing - and I slipped up in using the common language that presents the mind as a thing

Toth: no brain, no mind. Simple as that.

Marya nods

Toth: broken brain, no mind or broken mind...depending of degree of broken-ness ;o)

Renald: So, Sim, the mental is not a level of reality. Yes?

Simulat: When you get to thinking of the mind as a thing then you are forced to think of - what is that thing made of

Renald: heh, I'm not forced to do any such thing, but that's maybe beside the point

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Marya: what do you mean by 'the mental', Ren?

Winston: Dependency relations between minds and brains are not related to causal relationships-IMO

Renald: Of or characterized by the mind or minds, Marya

Marya: Can you be more specific? Do you mean things like thoughts, feelings?

Thoth thinks then that Winston's opinion would be in error...pending an explanation of how a mind could exist without a brain that makes some sense.

Simulat: I'm not sure of that Renald - I guess I'd say that a mind is a sort of action of a thing made of space-time - but I'm not sure I'd call it a level in the way that I have been talking about looking at space-time from different perspectives

Winston: A Mind could not exist without a brain, while still being able to influence lower level reality with an existing mind

Renald: Well, we're entertaining the notion that a mind is not an entity but a pattern of behavior on the part of an entity. What does that pattern consist of?

Renald: Ah, very good, Sim, that's all I've been curious about.

Thoth: then how is the dependency relation between a brain not related to causal relationships? Or rather...

Winston: HAHA, I said that wrong

Thoth: how is a dependency relationship of any kind not also causal?

Simulat: connections of neurons, flows of hormones, patterns of signals - that sort of thing Renald

Renald: Those aren't mental; those are neurological, biological, chemical, etc.

Simulat: they are the activity that is mental

Thoth: the 'mental', for what it is, emerges from the interaction/combination of all those processes/systemic operations...

Marya: yes Renald, but the result of the actions of those biological actions, is mental 'experiences'

Renald: But the problem, for me, is that the relationship between the "levels" of reality seem precisely to be this matter of reification of behavior -- that is, that atoms are the behaviors of particles, etc.

Renald: Emerges, yes...

Thoth: just like an image on a screen emerges from the arrangement of the pixels - but the level of organization/structure/complexity is orders of magnitude greater... but the principle is the same.

Renald: And experience, yes... :-)

Winston: A Mind that is causal makes more sense to me is all. The alternative being a bunch of laws that are throwing us around-imo

Thoth: ok, Winston, gotcha.

Winston: HAHA

Thoth: but still, the causal mind IS still subject to the laws of physics.

Marya: Yes, Winston, when we think about it in terms of being 'slaves' to determinism, it isn't a very encouraging thought - but we don't function at that level, so it doesn't make that much of a difference - it is just a matter of understanding the processes at various levels methinks

Thoth thinks she thinks rightly...he thinks.

Marya: lol

Renald: Well, here... is an atom something a particle system does?

Simulat: yes - and the idea of emergence is important - for instance, molecules have properties that quarks don't - even though molecules are made of quarks

Thoth: you could say that, Ren, sure. Why not?

Simulat: that's an example of emergence

Thoth: just a very different level of organization/structure/complexity.

Marya: ahhh, I sense a crossing of contexts - applying a given rule to all things

Renald: And a molecule is something an atomic system does?

Renald chuckles

Simulat: living things have properties that matter doesn't - that's an example of emergence

Thoth: sure. But don't press the analogy too hard... it could squish and all sorts icky stuff squirts out...

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Simulat: a mind has properties that are more than just being alive - that's an example of emergence
Renald: And what emerges is real?
Simulat: of course
Winston: I would rather default on the side that I just don't have all the facts and the Mind is causally free
Thoth: or at least relatively inexpensive, Winston ;o)
Winston: HAHA
Renald: Fundamental on its own level? Context? Whatever you call it?
Simulat: Renald - I express my feeling that reductionism doesn't hold by saying that there is no fundamental level
Renald: It might as well be free, Winston... cogito, ergo quasi sum
Renald nods at Sim
Renald: All right, then my other curiosity is this... what determines the choice of level from which one examines... things?
Thoth: I don't think that saying there is no fundamental level negates reductionism.
Renald: Not in itself, Thoth :-)
Simulat: whatever is relevant to your interest Renald :-)
Renald: But I'm willing to grant it for now
Marya: I guess that depends on the angle of the question, Ren
Marya: If we know why the question is being asked, if we know the applicable context, then we can examine it on the appropriate level, as best we know how
Renald: Sim... if my interest differs from yours... then what?
Simulat: then we look at different levels - or even different aspects of the same level Renald
Renald: I guess my question there is... on what basis is it determined that questions are worth answering?
Simulat: chemists look at space-time from one perspective - bike riders look at it from another perspective and a chemist switches perspectives when he leaves the lab and rides home on his bike
Thoth: folks, I have an urgent mission to attend to, otherwise I'll have to deal with some icky squishy results of the emergent biological processes of a domesticated mammalian system that has become quite...agitated.
Adios...nice talk, Sim. Thanks.
Renald: And if two people arrive at different positions with regard to what questions are to be answered, and their positions conflict, how much do the positions need reconciling and how much can they co-exist...
Marya: Renald, I guess that would be subjective
Renald nods ... Subjective...
Marya: yes, relating to this question: [13:56] Renald: *I guess my question there is... on what basis is it determined that questions are worth answering?*
Simulat: I have no one size fits all answer to that Renald - we need to figure it out in the circumstance
Renald nods
Renald: hmm
Marya: Coexistence is also possible I think, Ren, if there is some common ground to work from
Renald: well... we have our humanity, if we remember it
Marya nods
Simulat: yes
Renald: I really think that's more than sufficient, actually.
Birric: Who does?
Renald: Ah, Birric... I have an expansive definition of humanity :-) I use "peerage" as a species-neutral technical term, but then no one else knows what I'm talking about.
Marya: If you repeat it and explain it often enough, it could be a successful meme :]
Renald: I'll be straight, a lot of my concern doesn't actually have anything to do with reductionism or perjorations thereof, I really don't care. It has more to do with room for generalized respect for a diversity of ways of looking at the world and what people do there.
Renald: That's true, Marya, I should give it a go. :-)

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Birric: That would be nice

Simulat: sure Renald - I try hard to understand things, but there are other aspects of existence

Renald nods

Simulat: and it is important that people try to get along with each other

Marya: Indeed, Renald - I think humans have a lot of evolving to do in some ways - having prejudices of some sort or another is inherent, and I think we have to learn/be taught from a young age, about how to properly understand those processes and how they affect us - so that we are not influenced by them in the negative way that some prejudices do affect us

Marya: wow, that came out badly ... hope it makes some sense at least :/

Renald: I think so, too, Sim -- and Birric. It's just that so many of us have forms of what I sometimes think of as allergic memitis...

Simulat: looked fine to me Marya

Birric: You can do that better in some places than others

Renald: I think I understood, Marya... just had to put the pieces together :-)

Birric: Allergy to canines and felines?

Simulat: absolutely Renald - not all memes can find a home in all minds

Marya: yes, we are inclined to reject ideas and 'things' that go against our own feelings or inclinations - that is inherent - we just have to learn to understand 'why' we feel these things and learn to direct those feelings away from going in the wrong direction

Renald: Allergy to memes... certain ideas, or really, forms of expression...

Renald: I like that analogy because it similarly involves the activation of a defense mechanism in the face of something that is not actually a threat.

Marya: yes; it is an inherent feeling of defensiveness that we misdirect; we all do it

Renald nods

Birric: Not me

Simulat: sometimes we do that Renald - but other times it's a good idea to put up a defense

Marya: not at all, Birric?

Birric: Never - well hardly ever

Simulat: as usual, there are no absolutely correct responses that fit all circumstances

Renald: I have it towards Christianity -- not religion, mind you, just Christianity -- in a form shared by many Jews... it can be crippling. It took a long time for me to find effective treatments. :-)

Birric: I only make argument. They all fall flat. So there

Renald: heh

Marya: well, I think as far as 'some' religions or belief systems go, we do have reason to be defensive and so should not ignore those instincts - but this is why it gets tricky, because we have to apply reason to it - and there isn't one rule that fits all

Birric: Well, he raised the point of humanity

Renald: That could be... and definitely the no-one-rule, that's true

Renald: I did, sort of, Birric... I didn't follow your argument, I guess

Renald: Sim, I wasn't suggesting that defending against ideas or expressions that are a genuine problem, or even which might be, is not a good approach. It's when it's an "allergic" response...

Birric: Never - well hardly ever - was a quote from HMS Pinafore

Simulat: yes - I understand Renald

Renald: Over-active, incapable of moderating itself, etc. Not actually responding to circumstance... you get the picture

Simulat: yeah

Renald: Get two people going at it like that... no point, unless you just like fireworks

Simulat nods

Simulat: sometimes you just have to turn away

Renald: yup

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Marya: I expect that comes along with ignorance to some degree, Ren - but also, those irrational reactions have other instigations too - and I think ultimately it is a matter of sitting down and taking the time to think about the realities of those reactions are - whether they are valid or not, in order to be able to 'communicate across belief boundaries', as Sim says :)

Renald: Ignorance and prior pain, unfortunately.

Marya: prejudice, a feeling of being tired/worn out/hearing the same old thing over and over again when you have already 'rationalised' certain things - it is tiring, and also produces irritation, amongst a variety of other reasons - but as I said, I think it comes down to sitting down and thinking carefully and rationally about the real effect of someone else's belief system - and whether one is justified in being 'prejudiced' about it

Renald: That's one advantage to eschewing belief... just keep plenty of toothpicks handy

Simulat: sure Marya - but sometimes you can just give up; not all issues have to get settled - sometimes it's better to disengage

Marya: aye Sim, you can just give up, that's always an option - I guess it is a matter of how badly engaging affects both parties and whether the rational thing to do in the end is to just not communicate - I don't know - I guess there are so many variables in human relations to take into consideration

Simulat: nods

Renald: well, "giving up" re-enforces a frame of conflict -- there are other ways of looking at it

Marya: sure - you can call it giving up, or you can call it agreeing to disagree and disengaging. I guess it really depends on the importance of the relations

Renald: and the specific issue

Marya: yes

Simulat: yes to both

Marya: many variables

Renald: There are soooo many things it's really not necessary for me to have a position about in the first place. Of course, then people want to get into arguments about THAT. "You do TOO have to have a position, damn it!"

Marya: I think much in life that we spend time thinking about or stressing about, is probably not necessary either, Ren; we have a lot of programming to muddle through :)

Renald: I guess so :-)

