

Second Philosophy

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INTRODUCTION

Emergence is a buzzword and as is common with buzzwords it has various connotations for various people. Some use it in a weak sense - they feel the word is some sort of metaphor. Others use it in a strong sense - they feel that the word indicates something fundamental and important about the nature of reality. And still others use the word as a way of giving pseudo-explanations.

For instance to say that the mind emerges from the brain without saying how is a pseudo-explanation.

What does emergence mean? Here are a couple of definitions gleaned from Wikipedia:

The term "emergent" was coined by the pioneer psychologist G. H. Lewes, who wrote:
"Every resultant is either a sum or a difference of the co-operant forces; their sum, when their directions are the same -- their difference, when their directions are contrary.
Further, every resultant is clearly traceable in its components, because these are homogeneous and commensurable.

It is otherwise with emergents, when, instead of adding measurable motion to measurable motion, or things of one kind to other individuals of their kind, there is a co-operation of things of unlike kinds. The emergent is unlike its components insofar as these are incommensurable, and it cannot be reduced to their sum or their difference." (Lewes 1875, p. 412)(Blitz 1992)

This is a newer one:

"Professor Jeffrey Goldstein in the School of Business at Adelphi University provides a current definition: "the arising of novel and coherent structures, patterns and properties during the process of self-organization in complex systems" (Corning 2002).

Goldstein's definition can be further elaborated to describe the qualities of this definition in more detail:

"The common characteristics are:

- (1) radical novelty (features not previously observed in systems);
- (2) coherence or correlation (meaning integrated wholes that maintain themselves over some period of time);
- (3) A global or macro "level" (i.e. there is some property of "wholeness");
- (4) it is the product of a dynamical process (it evolves); and
- (5) it is "ostensive" (it can be perceived). For good measure, Goldstein throws in supervenience -- downward causation." (Corning 2002)"

I don't know about you, but with definitions like that its no wonder that emergence is often misunderstood. I will try to indicate what emergence means with some simple illustrations

First, consider this shape - I call it a spinner.

Second Philosophy

Now look at what happens when you put a bunch of spinners together. Notice how the bunch seems to transform the paper from a flat sheet to a complex folded surface. That transformation is an instance of emergence.

Or consider this simple set of Penrose Tiles.

And then look at what the tiling made by them looks like Now lets decorate the tiles. And look at this tiling. Lets try a new decoration And the same tiling. Finally - consider this picture - there are two ways of tiling a plane with Penrose tiles.

The way that gives the aperiodic tessellation and the way that gives a periodic tessellation. If you tile a plane with both then there is a crack between the two patterns.

I hypothesize that the two patterns can only have one connection point. The patterns that we see when we put the tiles together are examples of emergence. And I think so is the crack.

Here is how it works - you start with a low level element that has intrinsic properties like shape and decoration. Then when you put the tiles the intrinsic properties create the emergent properties of the higher level.

For instance - the aperiodic tessellation produced by Penrose Tiles is emergent - it arises out of the intrinsic properties of the shape of the tile, combined with a particular way of putting them together. And we see here some things that are important in emergence. First there are levels - a lower level where the interactions of the lower level creates something at the higher level that doesn't exist at the lower level.

Not only do you get something new on the higher level, but the properties you get at the higher level aren't really predictable from knowledge of what the lower level elements are like. Physical reality has very many of these kinds of levels.

Say we start with protons and neutrons and electrons and the forces that control their interactions. Properties like charge and mass in the subatomic particles interact to make a higher level - atoms. That is, atoms emerge from the iterations made possible by the intrinsic properties of the subatomic particles. The atoms themselves have their own intrinsic properties, which allows molecules to emerge which have intrinsic properties that allow various kinds of matter to emerge.

On a more abstract level we can say that chemistry emerges from physics and that biology emerges from chemistry and that minds and culture emerge from biology. An important aspect of emergence is that at each level things with the intrinsic properties found at that level interact with each other. That is causality is largely influenced by what level you are looking at.

In an important sense the cause of my reaching for my coffee cup isn't to be found at the level of subatomic particles. There are many controversies in this field. Just what causes me to reach for my cup? Is it my desire for coffee? Maybe - but then where does my desire come from? Its to be found on the level of me wanting a sip of coffee. In fact - when I reach for the cup then a huge number of subatomic particles move from one place to another. This is called "downward causation" and it contrasts strongly with the reductionist assumption that causation can only flow upward - from lower levels to higher ones.

QUESTIONS:

1. Is reality a place with these weird levels?
2. Can there be downward causality?
3. Is emergence more than a metaphor?

Second Philosophy

DISCUSSION:

- [12:18] Sunfire Langer: Firstly, I found Goldstein's definition very straightforward
- [12:20] Renald Starostin: Sim, I'm a bit confused by descriptions of emergence as a metaphor. Is that another way of saying that it's more a figure of speech than a description of something "real"?
- [12:20] Sunfire Langer: and second, reality is one thing very intricate thing, the only levels that do exist are when a mind such as a humans tries to make sense of it, the levels don't exist without being looked at
- [12:20] Simulat Almendros: yes Renald - I've talked to a lot of people who think its just a way of speaking - not an aspect of reality
- [12:21] Renald Starostin: I see...
- [12:21] Lokifluff Clarity: agreed Sunfire
- [12:21] Simulat Almendros: See Renald :-)
- [12:21] Renald Starostin: Heh, indeed.
- [12:21] Sunfire Langer: ?
- [12:22] Simulat Almendros: Sunfire - I'd say that the levels proposed by emergence are real - and that they are very important in terms of what reality is actually like
- [12:23] Lokifluff Clarity: I don't tend to like looking at things such as sub atomic particles as layered... I tend to be of the opinion that to think of matter in those terms creates confusion, as although any one thing can be a combination of several things, to consider it as having a level, for me delineates a separation that I am not sure exists
- [12:23] Wichard Wisent: But, Sim, I think that the levels are important because they give us a way of talking about aspects of reality that emerge into our consciousness
- [12:23] Simulat Almendros: for instance - the properties of the sun are emergent - the sun is more than a bunch of subatomic particles
- [12:23] Marya Blaisdale: well, to my mind, the word 'level' is essentially indicating 'context'
- [12:24] Simulat Almendros: a kind of context - one largely related to scale Marya
- [12:24] Renald Starostin: Yes, Marya, and context may be slightly more useful, because it doesn't carry the implication of hierarchy so strongly as level. I'm partial to "mode" myself.
- [12:24] Marya Blaisdale nods
- [12:24] Heraklitus Bohemian: I like the idea of context in this too. The Russian doll idea of whichever level you are choosing to focus on.
- [12:25] Sunfire Langer: what I was saying is very much not just 'a way of speaking', in terms of what a being is, is its that dependant on other beings to be a being itself, it makes little sense to see them as completely separate beings because, by defining them, we find that their very existence is bound into other beings, hence reality is a state of huge interconnectivity, the levels do not exist until they are observed, it is an arbitrary choice which level we look at, Sim
- [12:25] Heraklitus Bohemian: the emergence of the idea of emergence arises from the need for humans to express and make sense of the world at our currently level of consciousness
- [12:25] Simulat Almendros: I'd say that level is a good word because there is the hierarchy - not that any level is superior to others
- [12:25] Jo Williams: :)
- [12:25] Wichard Wisent: Yes, context is useful, especially as boundaries for levels become fuzzy and wave-like
- [12:25] Renald Starostin: I'd even go so far as to suggest that these things, whatever you call them, can only be said to emerge one from another once you grant some one of them priority over others. And I don't argue against doing so, just for recognizing that it's taking place.
- [12:26] Simulat Almendros: well - look at the picture behind me
- [12:27] Heraklitus Bohemian: I'd imagine it's a potentially infinite feedback system
- [12:27] Simulat Almendros: there are things to be seen in it that are not found in the individual tiles
- [12:27] Marya Blaisdale: yes, I would think so, so to speak 'cause=effect=cause=effect' and so on

Second Philosophy

- [12:28] Lokifluff Clarity: but Sim you could argue that there are things that emerge out of their tiles' relationships with one another, and not necessarily from the tiles themselves, or any levels of tiles
- [12:28] Sunfire Langer: but the potential for what is seen here IS existent in a single tile
- [12:28] Lokifluff Clarity: agreed Sunfire
- [12:28] Heraklitus Bohemian: true sim-and I wonder if what we see is affected by what we need to see or have a context for?
- [12:28] Lokifluff Clarity: it just depends on the possibility of relation, which is completely different from level
- [12:29] Simulat Almendros: well Hera - who would have expected the crack? Who would need it?
- [12:29] Renald Starostin: Expected, Sim?
- [12:29] Heraklitus Bohemian: we need to see the pattern to recognise the emergence. The crack is just an aspect of the whole
- [12:29] Marya Blaisdale: yes, Hera, the meaning derived from a human perspective, from the 'pattern recognition' ie: the context
- [12:30] Simulat Almendros: yeah - if you just look at the tiles in isolation I don't think you would fully grasp the things seen when you make the tiling
- [12:30] Sunfire Langer: pattern recognition is not dependant on context
- [12:30] Marya Blaisdale: no it isn't dependent on context
- [12:30] Renald Starostin: It isn't?
- [12:30] Lokifluff Clarity: why not?
- [12:30] Marya Blaisdale: but the context is how we derive meaning from it, Sunfire, how we interpret those patterns
- [12:30] Simulat Almendros: That's one of the key things about emergence - the higher levels have properties not predictable from knowing the intrinsic properties of things in the lower levels
- [12:30] Sunfire Langer: its a factor, certainly
- [12:31] Heraklitus Bohemian: which is why humans invented the atomic bomb :-)
- [12:31] Simulat Almendros: and that those properties at the higher level can have a causal influence on what happens at the lower level
- [12:31] Renald Starostin: Sim, can it be true in both "directions"?
- [12:32] Simulat Almendros: I think so Renald - to know the subatomic reality we actually had to basically get to that level and look
- [12:32] Simulat Almendros: it wasn't predictable from our macro scale
- [12:33] Sunfire Langer: well, if I may interject, reality is not made up of regular tessellating pieces, and made of many different pieces, if you look at Sim's example of a Sun, you are dealing with billions of trillions of pieces all interrelating to an exponentially complexity, it is no wonder we cant predict the larger things from the miniscule, because the interrelation of different things is not described in this presentation
- [12:33] Lokifluff Clarity: I am of the opinion that if you discard the notion of level and think in terms of relation then the question of direction also changes.
- [12:33] Heraklitus Bohemian: so in the coffee analogy are our cells wanting the coffee? it brings a good twist to listening to what our body needs
- [12:33] Renald Starostin: Right, Sim... to me, that only reinforces my sense that which "level" is up or down, more fundamental, in short, is a choice made by the observer.
- [12:34] Simulat Almendros: agreed Sunfire - the tiles only provide an illustration of the principle that I hope is simple enough to be fairly clear
- [12:34] Marya Blaisdale: I do agree with that in a sense, Loki - it is about 'relations'
- [12:35] Lokifluff Clarity: and relations are mutual and complex rather than merely directional imo
- [12:35] Marya Blaisdale: also true, Loki
- [12:35] Simulat Almendros: I don't deny that its all things relating to each other
- [12:35] Jo Williams: my thought also Marya
- [12:35] Wichard Wisent: And with very simple "objects" like tiles and simple recursion relationship, very complex patterns can develop

Second Philosophy

[12:35] Simulat Almendros: but that's very reductionist - its like saying that reality is just vibrating strings
[12:36] Heraklitus Bohemian: they provide the context
[12:36] Simulat Almendros: it throws out a lot of important knowledge
[12:36] Renald Starostin: Marya... isn't a context a set of relations? ;-)
[12:36] Sunfire Langer: so the emergence as termed is not really an entirely new thing at a higher level, because the possibility for such emergence is present in the smaller pieces as to how they will potentially react with different pieces
[12:36] Wichard Wisent: but when there are many, many objects and different relationships and recursions the "reality" get too complex for analysis without context
[12:36] Lokifluff Clarity: lol Renald
[12:36] Deoridhe Quandry: Sim, I think the word "just" is misplaced. Something may be made up of smaller, seemingly simple things, and become something more complex from another point of view. That doesn't make the thing either just simple or just complex.
[12:37] Marya Blaisdale: I don't think so Sim - I think it is just a contextual way of understanding things - recognising that each of those things plays a part within its own context but it isn't not acknowledging other contexts
[12:37] Sunfire Langer: is a Concerto 'just a bunch of vibrating strings'?
[12:37] Marya Blaisdale: and yes Renald, context is a set of relations :)
[12:37] Dar Innis: context itself is a relation
[12:37] Marya Blaisdale: yes
[12:38] Lokifluff Clarity: nice Dar
[12:38] Simulat Almendros: I agree Deo - but the idea that one level is just things on another level is the idea that I'm resisting

[12:38] Renald Starostin: Sunfire, the argument with emergence is that while whatever emerges does in fact emerge from the "smaller" pieces, it can't be predicted solely from the "smaller" pieces. To me, that makes Sim's example a bit limited, in that I suspect the behavior of the pattern could be completely predicted. But it's relatively simple, compared to... the sun.
[12:38] Deoridhe Quandry: Well, rightly, Sim. It isn't "just" that. It's also the resultant patterns.
[12:38] Deoridhe Quandry: A gestalt, if you will.
[12:38] Simulat Almendros: yes Deo
[12:39] Sunfire Langer: could possibly be predicted, but because of the complication of the equations in order to do it I think you would need a computer that can operate at a speed faster than light, or as big as that Sun itself, Ren
[12:39] Marya Blaisdale: I don't think even that would do it Sunfire
[12:39] Sunfire Langer: precisely
[12:40] Marya Blaisdale: you would have to be able to measure all variables in the entire universe methinks :)
[12:40] Simulat Almendros: Renald - of course the tile example is simple - but also - I've worked with things like that and have been continually surprised at what emerges
[12:40] Renald Starostin: Well, that's part of the argument, Sunfire. To find out what emerges by actually running the simulation isn't the same as predicting, at all.
[12:40] Deoridhe Quandry: It's experiencing.
[12:40] Renald Starostin: Right, Deo :-)
[12:41] Renald Starostin: It's paradicting.
[12:41] Sunfire Langer: any kind of prediction involves a dry run thought-experiment, Ren
[12:41] Simulat Almendros: Sunfire - one of the things that emerges from many simple deterministic systems is unpredictability
[12:41] Sunfire Langer: which I find delightful

Second Philosophy

- [12:41] Marya Blaisdale: lol
- [12:41] Dar Innis: <http://www.youtube.com/watch?v=gQK21572oSU>
- [12:42] Marya Blaisdale: what is it, Dar?
- [12:42] Dar Innis: millennium bridge opening
- [12:42] Simulat Almendros: and I'd say that in principle the behaviour of all the particles in the sun cannot be predicted - not even by Laplace's demon
- [12:42] Marya Blaisdale: ahhh yes, I have seen that - where the people started walking in much the same manner, which then disrupted the bridge's stability
- [12:43] Dar Innis: yeah, emergent behavior of a bunch of humans trying to walk
- [12:43] Marya Blaisdale nods
- [12:42] Renald Starostin: Actually, I think there's a difference between prediction and thought experiment... but I'm not a scientist.
- [12:42] Sunfire Langer: preposterous, that Demon can do anything, even if it s a metaphor
- [12:43] Simulat Almendros: I think that is a mistake Sunfire
- [12:44] Renald Starostin: It isn't even the behavior of all the particles, it's that the pattern of that behavior forms a structure.
- [12:44] Simulat Almendros: right Renald
- [12:44] Sunfire Langer: I wasn't being serious
- [12:44] Simulat Almendros: oops - pardon me for being serious :-)
- [12:45] Birric Forcella: What exactly does the sun have to do with emergence? How does it relate to tiling? What exactly "emerges" from the sun?
- [12:45] Marya Blaisdale: lol
- [12:45] Renald Starostin: Birric, the sun was being cited as itself emergent.
- [12:45] Simulat Almendros: the sun emerges from the fact that matter attracts itself Birric
- [12:45] Birric Forcella: The sun is about the most predictable aggregate phenomenon there is. Stars belong to the simplest objects in the universe
- [12:46] Birric Forcella: Emergent in what sense?
- [12:46] Birric Forcella: In that case anything is emergent and the word loses all meaning
- [12:46] Marya Blaisdale: That's why we apply context, Birric
- [12:46] Simulat Almendros: that the heat and light and size of the sun are not things found in the particles that the sun is made of
- [12:47] Deoridhe Quandry: Also, the phenomena of solar flares, I think, are an indication of an underlying unpredictability of the gestalt.
- [12:47] Birric Forcella: What precisely does context mean in the case of emergence?
- [12:47] Lokifluff Clarity: I must admit, I was not following why the comparison was being made with the sun, it did not make sense to me, as it seems to be taking something which I perceive as being incomprehensible by its enormity and comparing it to emerging tiles
- [12:48] Birric Forcella: Can you explain what gestalt means in the case of sun flares? What gestalt do we see in sun flares?
- [12:48] Deoridhe Quandry: The gestalt of the sun, Birric, which has unpredictable results.
- [12:49] Deoridhe Quandry: A gestalt is something in which the whole is greater than the sum of it's parts - one way of looking at an emergent system.
- [12:49] Marya Blaisdale: I think using the word emergence to explain how things come to be as they are is pretty accurate, Birric, and we apply context in order to better understand it - so I don't think it loses it's meaning at all, in fact I think it helps to explain things very well
- [12:49] Birric Forcella: The Gestalt of the sun? Do you know what gestalt means? It doesn't just mean shape and form
- [12:49] Simulat Almendros: Lokifluff - with the tiles I tried to illustrate the idea of levels - that when you have lower level things with intrinsic properties (tiles with shape and decoration) you get higher level things with different properties (a pattern)

Second Philosophy

- [12:49] Deoridhe Quandry: Where the pattern created by the parts is, in and of itself, a part.
- [12:49] Deoridhe Quandry: No, Birric, I have no idea what a gestalt is.
- [12:50] Birric Forcella: When the whole is greater than the parts, it's called synergy
- [12:50] Seaplane Jonson: another simpler example might be salt ... it is difficult to predict the properties of salt based on the properties of the constituents, sodium and chlorine
- [12:50] Lokifluff Clarity: well I guess that would then explain why I never got it Sim... lol... seeing as I balked at the idea of 'level' as I tend to see 'relationships' instead
- [12:50] Simulat Almendros: but my thinking is that an atom is a thing on a different level than a quark
- [12:50] Marya Blaisdale nods
- [12:51] Simulat Almendros: and - going through a series of levels the sun is something with properties that quarks don't have
- [12:51] Heraklitus Bohemian: I agree sim, and it's also part of a system at that level and the one above and below if we need to have a 3d context for it
- [12:51] Deoridhe Quandry: Ur, no... that's not what synergy means. Synergy is about entities cooperating for an end. Though synergy is another way of looking at an emergent system.
- [12:52] Heraklitus Bohemian: a gestalt is also the completion of a cycle
- [12:53] Birric Forcella: Well, you don't only have a problem with the level, but also with the interplay of level and relationship. Clearly something can only emerge "to" something. Things can't emerge to themselves. So you need a larger level in order to even coherently speak about emergence. But that makes the lower dependent on the higher. This seems to be the hidden problem of all this "emergence" talk - it's a hidden bootstrap theory and thus incoherent
- [12:53] Heraklitus Bohemian: or you could maybe say a feedback system
- [12:53] Deoridhe Quandry nods to Heraklitus.
- [12:54] Lokifluff Clarity: nice Heraklitus
- [12:54] Simulat Almendros: In fact Birric - in important ways the higher level does affect the lower levels - but it's only a bootstrap problem if you think it started
- [12:54] Birric Forcella: We speak of emergence because we desperately want meaning - but we can't create meaning from incoherent things.
- [12:55] Deoridhe Quandry: I'm finding myself caught up with the idea of comparing fractals with emergent systems - in one case you have infinite repetition, of a sort, from micro to macro. In the other, you have often incomprehensible changes from micro to macro.
- [12:55] Renald Starostin: Birric, is circular incoherent? I'm not following your argument.
- [12:56] Simulat Almendros: When I reach for my coffee then the higher level of my desire for a sip makes all sorts of things happen at the atomic level
- [12:56] Birric Forcella: Well, saying that an atom is on a different level than a quark simply hides the problem. How exactly does the atom make a quark?
- [12:56] Renald Starostin: I thought quarks made atoms. Officially
- [12:56] Deoridhe Quandry: We do think quarks make atoms.
- [12:57] Birric Forcella: Right
- [12:57] Deoridhe Quandry: "We" meaning people who accept the studies of nuclear physicists, of course.
- [12:57] Marya Blaisdale: :)
- [12:57] Birric Forcella: So your emergence stuff goes out of the window
- [12:57] Lokifluff Clarity chuckles
- [12:57] Renald Starostin: I accept them as such, Deo :-)
- [12:58] Deoridhe Quandry: Ren, Ren, Ren, don't you just know you've been brainwashed by physicist propaganda. ;)
- [12:58] Birric Forcella: If quarks make atoms, then atoms can't give "emergence" to quarks
- [12:58] Birric Forcella: As I said, emergence is a hidden bootstrap theory - and it is incoherent
- [12:58] Deoridhe Quandry: Quarks give emergence to atoms, though, Birric.

Second Philosophy

- [12:58] Renald Starostin: Birric, that's backwards again. The idea as that atoms emerge from interactions of quarks, not the other way around.
- [12:59] Birric Forcella: Renald, you didn't follow the discussion
- [12:59] Lokifluff Clarity: note! Interactions = relationships! lol
- [12:59] Birric Forcella: But you are saying what I said
- [12:59] Heraklitus Bohemian: Birric, I think in this context we reverse engineered the atom to invent the label of quark so it did actually invent it. We invented the idea atom first :-)
- [12:59] Marya Blaisdale: Right, Loki :)
- [12:59] Simulat Almendros: nobody said that atoms give emergence to quarks Birric - atoms emerge from the intrinsic properties of quarks and electrons
- [13:00] Renald Starostin: And I recommend everyone wash her brain at least once a week...
- [13:00] Marya Blaisdale: lol
- [13:00] Birric Forcella: What we agreed on before was that emergence needs "context" and the higher levels in order to validate this context. Nothing emerges to itself or to the level below. You need the higher level as a prior given
- [13:00] Dar Innis: quarks are thought to compose nucleons, not atoms. The fact that quarks are thought never to exist in isolation makes it impossible to say that nucleons emerge from quarks.
- [13:00] Deoridhe Quandry: And really, our idea of atoms and quarks are only theories on what we think is going on, and often grossly simplified, which ironically does have to do with the idea of an emergent systems since theories could be viewed as emerging from an overload of data. >.>
- [13:01] Deoridhe Quandry: We didn't agree on that, Birric.
- [13:01] Birric Forcella: Sure, we never agree on anything - but that was stated
- [13:01] Deoridhe Quandry: 'We' meaning everyone here present, of course.
- [13:02] Renald Starostin: Actually, Birric, I may agree with that as far as using the term "emerge" goes. I suspect the relationships themselves go in all directions, so, as I said earlier, one can only speak of emergence once one has granted one "level" priority over the others. I don't see that as making such models incoherent, however.
- [13:02] Birric Forcella: Was just trying to make sense from the discussion. Apparently even emergence doesn't emerge
- [13:02] Simulat Almendros: I don't understand why you say that Dar
- [13:03] Dar Innis: well, you cannot look at a single quark's properties like you would look at a tile. its, even going by quark theory, impossible.
- [13:03] Renald Starostin: It merely makes the models radically unfounded... but I haven't found one yet that isn't.
- [13:03] Dar Innis: so, you cannot think of a nucleon as a pattern and a quark as a tile in the pattern
- [13:03] Birric Forcella: I'm trying to demonstrate that "emergence" is a trivial illusion - stating things we knew all along as pawns now in the garb of Kings and Queens
- [13:03] Dar Innis: quarks go far beyond Lego block models of nature
- [13:03] Simulat Almendros: yes - its one of the intrinsic properties of quarks that they are never alone - and so nucleons emerge from that property
- [13:04] Dar Innis: quarks only seem to exist in nucleons
- [13:04] Lokifluff Clarity: and again... to be honest folks... what I see is that comparisons are being made with emergent to understand how the very big works, and how the very small works... which as far as I am aware, is still under investigation... and so I wonder if what is 'emerging' is really that the phrase 'emerging' denotes our own lack of understanding rather than any definite process
- [13:04] Deoridhe Quandry: I see where Dar is going with this, though; quarks themselves exist in relationship. Ironic.
- [13:04] Simulat Almendros: and the kind of nucleon depends on the mixture of quarks
- [13:04] Heraklitus Bohemian: each theory is only the current emergence of meaning given the current observable information is it not?

Second Philosophy

- [13:04] Dar Innis: how can you say nucleons emerge from something it takes a nucleon to see?
- [13:04] Birric Forcella: Bravo Loki
- [13:05] Renald Starostin feels a headache emerging, and checks to make sure his bootstraps are well-hidden.
- [13:05] Lokifluff Clarity: lol
- [13:05] Deoridhe Quandry: I would say it's more like trying to understand what happens when we zoom in and zoom out, Loki, and how those changes in perspective reveals information not existing otherwise.
- [13:05] Heraklitus Bohemian: :-)
- [13:05] Marya Blaisdale: I expect it is 'just' a way of describing things, Birric - and using the word 'emergence' may or may not be a good thing - as long as what it is, is understood by everyone, hopefully leaving little room for extra interpretations ... though I expect that would happen anyway :/
- [13:05] Lokifluff Clarity: nice Heraklitus
- [13:05] Heraklitus Bohemian: I agree Marya
- [13:06] Lokifluff Clarity: agree Marya
- [13:06] Birric Forcella: Nobody ever denied that bigger things are made from smaller things . . .
- [13:06] Heraklitus Bohemian: and what use that information has in terms of meaning
- [13:06] Dar Innis: powers of 10 <http://www.youtube.com/watch?v=A2cmlhfdxuY>
- [13:06] Renald Starostin: Indeed, Marya, words are "just" tools, after all.
- [13:06] Dar Innis: some smaller things are made of bigger things
- [13:07] Marya Blaisdale: lol, Renald, I am rethinking my use of the word 'just' - it seems to cause a rift in places where it shouldn't :]
- [13:07] Deoridhe Quandry: Some bigger things bear little to no resemblance to the smaller things they are made up of, or more information is available when you look at the bigger thing than you can get from looking at the smaller things.
- [13:07] Deoridhe Quandry: The idea of emergence comes in there, if I understand Sim correctly.
- [13:08] Renald Starostin: Indeed, Deo... the question at hand seems to be whether or not a composite is in fact a thing at all.
- [13:08] Simulat Almendros: I agree with that Deo
- [13:08] Birric Forcella: Anyway, the specific theory of emergence does not trivially state that big things are aggregate of small things - but that the larger aggregations exhibit distinct properties - like wetness is a property of an aggregation of water molecules which each by itself is not wet. However, again, you have the problem that they need a higher reference level in order to validate "wetness" - so I don't think it is a genuine property of water
- [13:08] Renald Starostin: Except, Birric, what is water?
- [13:08] Deoridhe Quandry: Right, Ren. And part of that issue is that, quite frankly, we act as if they are, which sort of seems to apply that categorization of "thing".
- [13:09] Birric Forcella: If anything, wetness is a property of things that "can get wet"
- [13:09] Deoridhe Quandry: We treat the sun as a thing, not as a collection of atoms.
- [13:09] Renald Starostin: Which are not molecules, Birric.
- [13:09] Renald Starostin: Oh, Deo, I'm sure that's just habit.
- [13:09] Deoridhe Quandry: Oops. Me and my bootstrap habits.
- [13:10] Simulat Almendros: ANNOUNCEMENT: We have been going for about an hour now and so our official time is up. Thanks everyone for a very interesting discussion :-)
- [13:10] Simulat Almendros: and no need to end it here of course
- [13:10] Deoridhe Quandry moves around electrons to make her avatar move. >>
- [13:10] Lokifluff Clarity: lol
- [13:10] Jo Williams: lol
- [13:10] Renald Starostin: I still have the nasty habit of treating things as things... hellacious to break.
- [13:11] Heraklitus Bohemian: I hate breaking things

Second Philosophy

- [13:11] Marya Blaisdale: Richard Dawkins gave a really great speech where he mentioned 'middle world' existence, where we as middle sized life forms, relate to the world in a specific way (the context within which we relate to the world), and this was such an excellent description of how we determine properties and how we understand 'things'. It is worth looking up (though I cannot remember what it was called)
- [13:11] Birric Forcella: The aggregate "sun" is NOT the emergent thing - of if it is, it is only trivially so - the emergent properties of the sun (if such can be claimed at all) would be things like nuclear fusion - spherical form - gravity effects, and the like
- [13:11] Dar Innis: well, its more practical in my context to reach for a cup full of water than it is to enter a bigger dance of two dances of dancing dances.
- [13:11] Deoridhe Quandry: Sounds like that came out of linguistics. There have been interesting studies of what level we assume someone giving a word is referring to, and how consistent that is worldwide.
- [13:12] Heraklitus Bohemian: or coffee dar...
- [13:12] Dar Innis: right
- [13:12] Marya Blaisdale: lol
- [13:12] Deoridhe Quandry: Ooooooh, fusion is trivial.
- [13:12] Renald Starostin: Everything came out of linguistics... we control the vertical... do not adjust your set.
- [13:12] Lokifluff Clarity: I can't help but think that 'emergence' could be considered another way... it could be our own acknowledgment that something has become present to us whereas before it was not present to us, and its history, its "how it has become present" is not yet known. With this definition it could be argued that 'emergence' is another way of saying an announcement to myself.
- [13:12] Dar Innis: coffee is an even more intricate dance than water
- [13:12] Deoridhe Quandry: Oh, I like that, Loki.
- [13:13] Wichard Wisent: And linguistics certainly has levels

