

# THE FALLACY OF COMPOSITION AND THE GEOMETRY OF IDEAS

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## I

A Logical Fallacy describes an error in reasoning that can lead you to a false conclusion. There are many defined Logical Fallacies, but perhaps the most powerful is the Fallacy of Composition.

Single-handedly, the Fallacy of Composition prevents the application of the scientific method to the study of ideas – their composition, their geometries, and the laws governing their linkages. This is not to say that the Fallacy itself is invalid – far from it, because it is very useful when properly applied. But this paper will argue that when the Fallacy discredits the relationship between physical laws and the realm of ideas it is improperly applied.

I am defining “ideas” as organizations of energy, with each individual idea differentiating itself from its neighbors by these organizations. The basis for this definition appears in Part II below.

The Fallacy of Composition distinguishes between the properties of a ‘whole’ (an object, or a collection/set of individual members) and the properties of the parts or members that make up the whole. It is formally defined as:

All parts of **X** have the property **P** (premise). Thus, **X** itself has the property **P** (conclusion).

The following examples illustrate the errors that the Fallacy is designed to prevent:

1. Because the atoms of a spoon are not visible to the naked eye, then the spoon itself must also be invisible to the naked eye.
2. Because the bricks composing this wall are light and easy to carry, then the wall itself must be light and easy to carry.

Now that we understand how the Fallacy of Composition is correctly applied, let’s look at how, I believe, it is incorrectly applied:

3. Because every individual thing in the Universe was created solely in a Big Bang of energy, then the Universe itself must be solely composed of energy.

This is considered a violation of the Fallacy of Composition not because the logic fails (it does not, either nomologically or factually), but rather because of what the statement implies (described below). The statement must be and is discredited indirectly, based on the perceived meaning of the content.

First, three important implications of statement number three, and the objections that are believed to justify the application of the Fallacy of Composition:

A. If the Universe is composed solely of energy, then the interactions of energetic microparticles like quarks, electrons and protons influence – i.e., cause changes in - the macro world of people, cars, and galaxies. The required chains of causality, reduced to trillions upon trillions of individual causes and effects, appears so improbable as to be impossible. This argument is excellently explained by Crawford Elder – [http://digitalcommons.uconn.edu/philo\\_articles/3/](http://digitalcommons.uconn.edu/philo_articles/3/).

B. The similarly substantial issue that certain laws of quantum mechanics, such as the uncertainty principle and faster-than-light travel, do not appear to work in the macro world.

C. The implication that ideas, as members of the Universe, also are composed of energy and must obey physical laws. Further, ideas are composed of the same microparticles as all other forms of energy. The objection here for non-Platonists is that ideas have no independent existence apart from the neural firings of human minds, and moreover, as unacknowledged entities, idea combinations are independent of the laws of physics.

Despite these obstacles physicists continue to look for a Grand Unified Theory that unites the strong, weak, electromagnetic, and gravitational forces of energy into one unified force that can be described by a single mathematical equation. Essentially, scientists are saying that energy in the micro and macro realms may have different forms and interactions, but they believe energy as a whole is self-consistent. This is important because without the self-consistency of energy and its laws, which constitute the very fabric of the universe, there can be no coherent causality, and therefore no coherent basis for science.

It is not my purpose here to answer any or all of the objections proposed by thinkers who, with reasonable justification, apply the Fallacy of Composition to statement number 3. Time will prove or disprove their objections and my contentions. Instead, I am stating my belief that the nomological truth of statement number 3 carries more weight than the cumulative arguments against it, and I choose to use that weight to describe a theory of ideas that integrates energy as its foundation.

## II

There is a line of reasoning that allows us to see ideas as entities composed of energy, and furthermore, allows us to see ideas as entities that occupy space-time with definite forms.

- 1) The Big Bang created a Universe of energy
- 2) Each thing that exists in the Universe is composed of energy
- 3) Energy obeys the known and unknown laws of physics
  
- 4) Energy and mass are mathematically related ( $E=MC^2$ )
- 5) Mass, in all its definitions, is a quantity of matter
- 6) Energy can be viewed as matter
- 7) Matter has physical dimensions and occupies space
  
- 8) Ideas exist in the Universe, and are therefore composed of energy
- 9) Ideas, composed of energy, can be viewed as matter
  
- 10) Ideas are defined in terms of other ideas
- 11) Geometry elucidates the relationships among material objects
- 12) A Geometry of Ideas follows.

Put another way:

- A) Energy implies mass
- B) Mass implies matter
- C) Matter implies structure
- D) Structure implies information
- E) Information implies relationships

The argument is simple: If all the energy and particles composing the Universe originated at one place at one time, then that energy and those particles are inextricably related to each other via the force that created them. That is to say, there is a mathematical (and therefore logical) relationship between and among all the pieces of the Universe. This is the big picture.

But because ideas are not generally accepted as having a physical reality, ideas do not appear to conform to any coherent system of physical laws. I am not minimizing the contribution of symbolic logic, which is the purest form of idea analysis when it is used to analyze the forms of an argument (rather than the arguments themselves, which can fall to point-of-view and definitional issues, especially at a certain level of abstraction). But symbolic logic at its core is a

method of determining truth and falsity, whereas idea geometries, in and of themselves, are value free apart from the relative strengths of their designs. Treating ideas as physical objects requires a different perspective – so while for convenience ideas may be seen as short chains of associations, in fact they are structures in a vast network of relationships onto which each individual idea only offers a window.

It is this network of relationships, originating in the Big Bang and still evolving, that I think may hold the key to relating the causal transactions and laws of microphysics and macro objects. If ideas have a physical reality, then they also occupy space. It may not be the minutiae of logical causal strings that connect micro and macro events, it may be the geometry of the physical relationships the causal strings embody. And the geometry may not depend on fixed physical boundaries, but rather on a general form unaffected by individual microparticles winking in and out of existence, perhaps from one form to another. Objects of all types would be born from tendencies within the relationships of microparticles.

Put another way, causality, even only as an idea, has a physical structure. The “meaning” of ideas is conveyed by their physical structure – form is function - which is to say that meaning is a function of geometry, or, if you will, the interactions of geometric objects.

So the causal minutiae of trillions of improbably directed push-pulls between/among micro and macro events (Objection A) may not be the point. Instead, in this case causality would be the finite set of embodied physical relationships reflecting up the chain of causality. The collection of triggering events is the complete set of possible physical relationships among microparticles and macro objects. An idea’s physical geometry is the transmission method of information

My main point is that generally ideas are treated as ethereal, formless entities that, without a stated empirical basis, are claimed to be controllable (i.e., made more efficient) by the laws of logic. In that non-reified existence there is no recognition that the laws of logic must also be the laws of the Universe, and that they cannot violate empirical physical laws. Moreover, there is no recognition that all the laws of logic and all the laws of physics must be translatable, one to the other.

### III

Ideas are physical products of the Big Bang, each with its own design and physical meaning, and they must obey all the physical laws that other creations obey. Seeing ideas as physical entities may lead us to a better empirical understanding of causality.

Further, because ideas are physical entities with physical properties, the relationships among them may best be expressed via a geometry of ideas.

I do not know if any of the thematic ideas presented here already exist in part or in whole in another thinker's (or group of thinkers) works. If any ideas here appear to be those of another thinker, then kindly assume that I am referencing them.

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