

The Principle of Relations Predicted that the So - Called Black Holes Create Stars

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1. Introduction

The Principle of Relations¹ has predicted that black holes create stars, as now have been seen by the Hubble Space Telescope:

“Hubble catches a black hole creating new stars. *The black hole at the heart of this dwarf galaxy is kick - starting star formation instead of cutting it off.*”²

The illustration below is based on Hubble Space Telescope observations of a 200, 000 - light - year - long “conrail” of stars behind an escaping black hole. Credit: NASA, ESA, Leah Hustak (STScI)³



However the image of a black hole has often been shown like this⁴:



The questions I want to raise is if do black holes actually exist or is the image based on optical illusions and invalid equations?⁵ These two images do not have the same interpretation of black holes.

IF black holes have singularity and a strong gravitation that nothing, not even light, can come out, **THEN** no stars can be created.

These two images have the exact opposite position. How can we deal with this conceptual lack of clarity?

This is our big possibility finding the theory based on the most fundamental concepts understanding the physical reality, including both relativity and quantum. Let us start with the contemporary theory of black holes, which is based on Einstein’s EFE, i. e., Einstein’s Field Equations.

Since Einstein himself understood that his theory of relativity was not complete in the sense that it did not explain the elementary world of particles. He did struggle for many years to find the theory of everything, but failed.

Let us start with the equation of black holes, where the most common equation of black holes is this⁶:

$$r = 2Gm/c^2$$

G is the gravitational constant, c is the speed of light, m is the mass of the black hole and r is the Schwarzschild radius.

This equation is derived from Einstein’s equation for general relativity:

$$G_{\alpha\beta} = \frac{8\pi G}{c^4} T_{\alpha\beta}$$

Some constants

In the case of black holes, these equations and their images reflect each other, i. e., the image is a mirror of the formula. Is it possible that these mirrors are illusions and that we only see what our minds are programmed to see?

An alternative interpretation of black holes

The Principle of Relations claims that in physical reality continuous flows of packages move in “tubes” between all systems, resulting in gravitation, force, energy and the transport of masses. These flows contain all mass in the Universe, including black holes, dark matter and dark energy.

If we now, before going further in detailed studies of these equations and images, introduce some new concepts for understanding physical reality, we might have an alternative view of understanding the phenomena of black holes.

Here we can ask Einstein’s question of completeness⁷:

- 1) “Is the description given by the theory complete?”
- 2) “Every element of the physical reality must have a counterpart in the physical theory.”

Complementary to these two questions, we introduce the following requirement:

- 3) Every concept has to represent the physical reality *directly and concretely*.

Now, comparing the established logic from the formulas and the images above, with the logic and image of the principle of relations, what do we find?

The new concept *relation* is based on this postulate:

Nothing exists in isolation, i. e. everything exists in relations.

The concept relation relates to reality by showing that there are relations between all parts in the Universe, where:

- 1) **a, b, c ...** are any system, subsystem, unit or part in any field of the Universe, e. g., suns, planets, moons, galaxies, quarks, leptons, hadrons, mesons, baryons, nuclei, atoms, cells and molecules.
- 2) The relation **R** is a flow (wave) of packages, $p_1 - n$, between a, b, c ... in any field of the Universe.

This model is basic.



Based on the postulate - nothing exists in isolation, i. e., everything exists in relations –in combination with 1 and 2 above, the principle is

$$X = aRb$$

The principle of relations claims that between all systems and between all parts of any system, S, there is a continuous flow of packages $p_1 - n$, i. e., in aRb , $R = p_1 - n$, and the formula is

$$S = ap_1 - nb$$

S is a complex of relations between all parts and elements in the system, i. e., the a, b, and c are complex systems, which send and/or receive flows of packages, i. e., $p_1 - n$

$$R = \sum p_1 - n = p_1 + p_2 + p_3 \dots p_n$$

The big challenge is now to identify all the *p* in all relations and to identify, certainly and concretely, the logic of

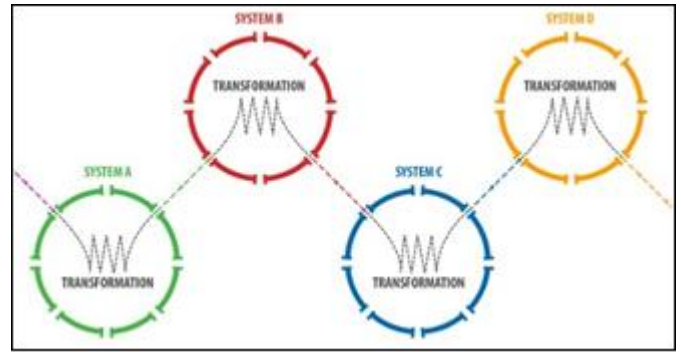
$$S_1 = (a_1R_1b_1) R_2 (a_2R_2b_2) \dots$$

Based on $X = aRb$ and $S = ap_1 - nb$, any system is and can be described as complex flows. We might call them wave functions, since a wave function is a flow of masses. It functions as a logistic system. Any (transportation -) system has the same logic. It contains instructions as to how masses

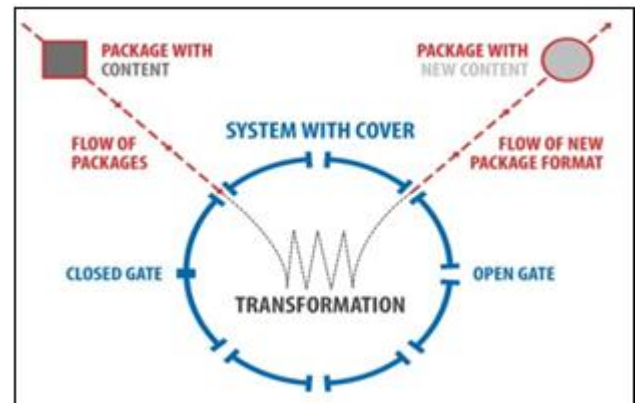
are delivered. There are addresses, carriages, details of how the masses are to be loaded and unloaded, sizes of the masses, how the masses fit into different parts of the transport system, calls for masses, “doors” to the cover of a system, and a mechanism to open “doors”. At all points of delivery the masses will change appearance. They will look different. They will be transformed.

Let us call the mechanism of transformation a *Transformer*.

The model below is an overview and conceptualisation of the role the Transformer plays in the Universe:



The gates are crucial and important, and they can schematically be shown as in this model:

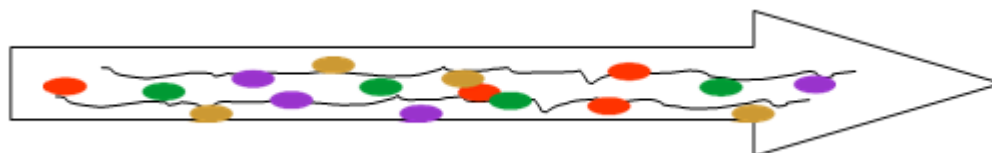


Now, what will the Transformer look like and how will it behave in order to transform packages?

A Transformer is *the mechanism which directs and leads packages*, e. g., protons and electrons. We need to identify and map all flows in the Universe and show how black holes function as the Transformers for these.

The same principle of flow applies to all systems and all levels and all masses of reality, e. g., the Earth, the Universe, the human body, organs and the cell.

The basic model of a transformer can be illustrated as below:



The new concept TRANSFORMER, i. e., there is interaction between the pathway, its infrastructure and the packages - they are woven and interconnected together.

Packages enter the pathway in order, then by the infrastructure they are organized and transformed into a new shape; a new entity occurs, e. g., galaxies, stars and planets.

As above, we are familiar with the Principle of Relations, its equations and its images. Now we must take it further.

We must apply those concepts of relations to black holes.

Black holes might be “pumps” for flows of packages in the Universe, and a black hole might be a Transformer. They transform masses of packages into the next system in the Universe, e. g., Galaxies and Suns.

Again, the equation of black holes is:

$$r = 2Gm/c^2$$

G is the gravitational constant, c is the speed of light, m is the mass of the black hole and r is the Schwarzschild radius.

Since the equation is based on Einstein’s General Theory of Relativity, we must go deeper in the concepts.

The equation E=mc² contradicts Einstein’s own criterion for a complete theory that “every element of the physical reality must have a counterpart in the physical theory”, since it raises the question as to which element the concept c² has in the physical reality. The argument could be made, that the equation then is not valid.

Since the equation E=mc² has impacts on the general theory of relativity, then this theory would not be built on solid ground. When c² is taken off, the black hole equation falls apart. What’s left are the constants m and G, but they don’t make sense any longer.

As for now, the equation for black holes is derived from Einstein’s equation for general relativity:

- 1) Einstein’s Field Equations, EFE, consist of ten equations constituting the general theory of relativity. However here I need to simplify the basic concepts in order to compare the concepts of the principle of relations.
- 2) The most used equation is this

$$R_{\mu\nu} - \frac{1}{2}R g_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$$

Where the left side is Einstein’s tensor and the right side is the energy - momentum tensor.

- 1) Working in geometrized units the equation is G_{μν} = 8πT_{μν}, where G = c = 1.

- 2) To understand and elaborate the fundament of EFE, I will use the even more simplified equation G_{μν} = T_{μν}.
- 3) The curvature of space - time cannot be equal to matter/energy. It is not the amount or size of masses that creates the behaviour of the Universe, called the space - time curvature. An argument could be made that it is not as previously described but rather a consequence of aRb.
- 4) The equation must be G_{μν}T_{μν}, which will now be seen as a description of the universe.
- 5) STCM means Space - Time - Curvature of Masses, i. e., STCM = G_{μν}T_{μν}.

The simplified formula G_{μν}T_{μν} can be transformed to X = aRb:

- 1) G_{μν} ≠ T_{μν}, i. e., mass and form are one in co - existing; it is G_{μν}T_{μν}.
- 2) aRb results in gravitation by flows of packages, i. e., p_{1 - n}, between bodies a and b in universe.
- 3) Form is the system where mass flows. Hence, the concept “system” replaces the concept “form” or any of its synonyms, e. g., architecture, design, space and shape.
- 4) What is left is RS, i. e., Relation and System, which is aRb.
- 5) From the equation G_{μν} = T_{μν} there are two valid concepts, i. e., mass, m, and form, f.
- 6) Then G_{μν}T_{μν} is equal to mf, where m can stand for m₁, m₂, m₃ ... = p_{1 - n} and where f can stand for form, which is the system, i. e., a₁, b₁, c₁ ...
- 7) Now we can translate G_{μν}T_{μν} into aRb, i. e., a₁p_{1 - n}b₁.

Then, by using the equation X = aRb, we can transform the most important equations of force, relativity and quantum into the equation as below, which unites force, relativity, quantum and energy with black holes, dark matter and dark energy:

$$X = a (\Psi (x, t) = p_{1 - n}) b$$

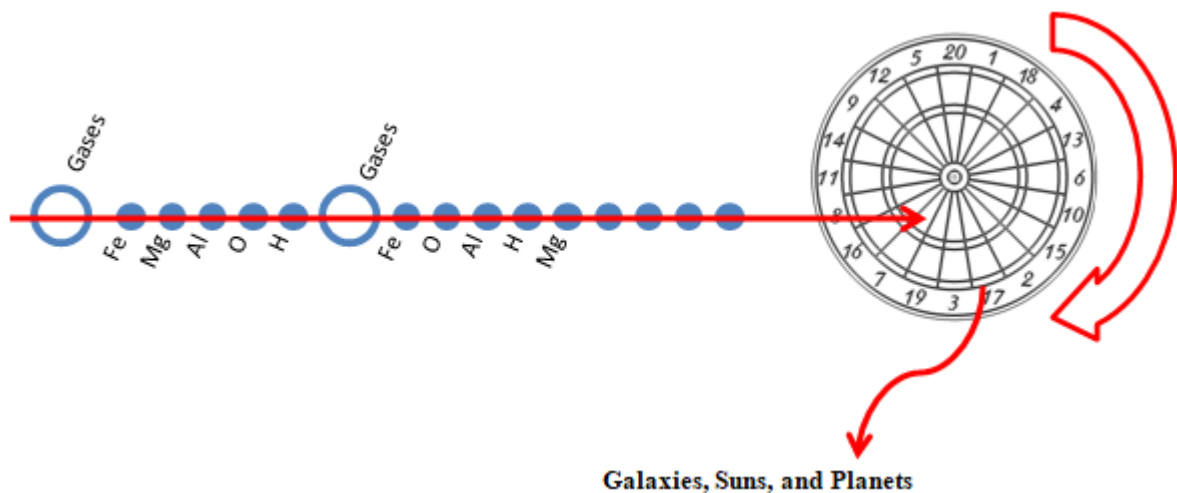
where X stands for force, gravitation and energy, a and b are systems and p_{1 - n} are the flow of packages, i. e., X = ap_{1 - n}b.

Black holes are transformers in the Universe

Based on the basic model below, we can now imagine how flows are being transformed in the entire Universe.



Let us first take the position that the main content of gas (X) in the Universe is hydrogen (H), then in combination with the elements of iron (Fe), aluminium (Al), magnesium (Mg) and oxygen (O), we can illustrate the Transformer:



Galaxies, Suns, and Planets

Black holes are Transformers between galaxies using packages of the so - called dark matter and dark energy. The conclusion is that black holes do not exist. They are only imaginary, based on wrong and not valid postulates and theories of physics.

2. Conclusion

It is obvious that contemporary science has no theory explaining how stars are created by the so - called black holes. The reason, basically, is the same as why there is no theory that unite relativity and quantum.

Science just needs a new theory.

The Principle of Relations and its formula $X = aRb$ is a possible answer.

The Principle of Relations did predict that the so - called black holes are transformers creating stars and planets. Now we have proof. This is fact.

I have followed the wisdom of Albert Einstein:

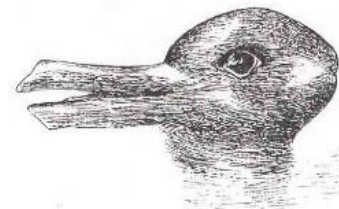
“In my opinion, nothing can be said concerning the manner in which the concepts to be made and connected, and how we are to coordinate them to the experiences. In guiding us in the creation of such an order of sense experiences, *success in the result is alone the determining factor*. All that is necessary is the statement of a set of rules, since without such rules the acquisition of knowledge in the desired sense would be impossible. One may compare these rules with the rules of a game in which, while the rules themselves are arbitrary, it is their rigidity alone which makes the game possible. However, the fixation will never be final. It will have validity only for a special field of application (i. e. there are no final categories in the sense of Kant).”⁸ (My cursive)

If a theory can predict that the so - called black holes create stars, and a space telescope can observe it, then it is success.

Notes

[1] The analysis was first described in the book *REALITY and the PARADIGM of RELATIONS*, published by

- Nova Science Publishers, New York, 2021, at pages 177 – 181.
- [2] Hubble catches a black hole creating new stars | Astronomy. com
 - [3] Cosmic Monster on the Loose: Runaway Supermassive Black Hole Is “Not Like Anything Seen Before” (scitechdaily. com) and A Cosmic Monster on the Loose: How a Runaway Black Hole Is Creating a Trail of Stars - SciQuest
 - [4] <https://www.jpl.nasa.gov/edu/news/2019/4/19/how-scientists-captured-the-first-image-of-a-black-hole/>
 - [5] Ambiguous images can also illustrate the problem. The best - known image is the rabbit - duck illusion, which Wittgenstein explained by “seeing that” or “seeing as”:



- [6] <https://www.quora.com/What-is-the-mathematical-equation-for-a-black-hole>
- [7] Page 777 in the *PHYSICAL REVIEW*, VOLUME 47, MAY 15, 1935: Can Quantum - Mechanical Description of Physical Reality Be Considered Complete? By A. Einstein, B. Podolsky and N. Rosen, *Institute for Advanced Study, Princeton, New Jersey*.
- [8] Albert Einstein: *Out of My Later Years*, 1950. Page 65.