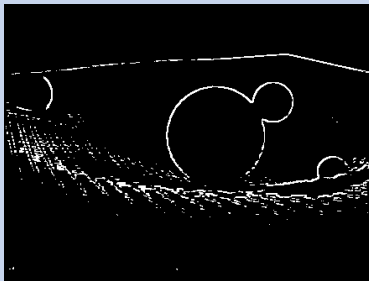


# *Can philosophy decipher Gravitation?*

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## **Introduction:**

The philosophical theory of *Infinitism* has to show its function and utility regarding the real puzzling issues the science is facing. Same for the technological problem where we are looking the practical solutions for the wellbeing of people and societies.

What would be, otherwise, the relevance of working on a new theory in philosophy?

## **Unified theory**

In our previous books and papers, we tried to give some examples of the usefulness of this theory. Here is another example in the occasion of a [newly published report](#) about the experience of the texture of space.<sup>1</sup> We will try to show how *Infinitism* would be helping clarify some problems in

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<sup>1</sup>Source: Is Space Pixelated? The Quest for Quantum Gravity. By WHITNEY CLAVIN, CALTECH JANUARY 9, 2022 ↗ [scitechdaily.com/is-space-pixelated-the-quest-for-quantum-gravity/](https://scitechdaily.com/is-space-pixelated-the-quest-for-quantum-gravity/)

quantum physics<sup>2</sup> through a general definition of matter, including gravity.

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### **Unifying theory:**

The efforts keep going for a unifying theory that could reconcile quantum mechanics to astrophysical entities, like the *string theory* and alike.

We read in a recent article that:

“Sometimes there is a misinterpretation in science communication that implies quantum mechanics and gravity are irreconcilable,” says Cliff Cheung, Caltech professor of theoretical physics. “But we know from experiments that we can do quantum mechanics on this planet, which has gravity, so clearly they are consistent. The problems come up when you ask subtle questions about black holes or try to merge the theories at very short distance scales.”

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<sup>2</sup> Please note that I don't have any expertise in quantum physic. The development that will follow is based on our philosophical work, and nothing else.

Are we stuck there? I think that a getaway for this tentative field would be, primarily, not in physics but in philosophy. We need an expedient vision of the universe that could open the way to much more scientific discoveries and theorizations than what we are struggling to do at present for specific and intricate topics like the nature of gravity, for instance.

The philosophical theory of *Infinitism* might have the capacity to provide a coalescing framework for linking microcosm to macrocosm.

### **But how?**

It looks that taking *infinitude in action*, as the main mechanism of matter's existence, will enable us to find a guiding line for that. Such a choice would be able to show the common denominator of all scales and spheres of matter.

The fact that the matter displays some similar features in all its diversity -that we could scrutinize- gives us the possibility of a careful extrapolation:

*Everywhere there is matter, these features will be present and detectable as well.*

If we could form some general rules of this sameness of matter, we will then have a tool that could be applied to the nearest and farthest material phenomena in the universe. These general rules will be the first theoretical substrata we need for understanding any specific thing later, once we obtain verifiable related data from the outermost or innermost objects in the microcosm or macrocosm.

In order to see how these principles could be used to found a unified theory of matter, let's look at this step-by-step methodology of the infinitist approach to the matter:

- We take **infinity** as the sole reality of the observable universe.

- This means that anything else in the cosmos is a byproduct of infinity and has no existential autonomous aspect.
- Infinity means **infinitude in action**.
- Infinitude in action is what happens in, and between the **infinities**.
- The infinite is perceived, through our anthropic sensory, as **finite**.
  - Finite is an invention on our sensory, infinite is its discovery.
- Any finite is actually infinite.
- Any finite is, therefore, infinitude in action.
- We call a finite, **phenomenon**.
- Any phenomenon is infinite.
- Each phenomenon is composed of **components** (finite[s]) and **subcomponent** (sub-finite[s])
- Every component or subcomponent is infinite.

- Every component (finite) is **related** to other components (finite[s]).
- The **interrelations** between the finites are infinite.
- The **ways** these interrelations between the finite[s] take shape are infinite.

So, the whole universe and each object in it is composed of the *infinite interrelated finites*. At the core of the above statements are

1. Infinite components and subcomponents that compose the matter.
2. Infinite interrelations between components and subcomponents.
3. Infinite modes of establishing these interrelations.

These three are intertwined and shape what we can call, by the same token, infinity, infinitude in action, matter, or universe.

So far, the approach to initiate a unified theory is quite philosophical-phenomenological. But we remind that we wanted to see how this theory could back the science for searching the answer in its specific field.

### **Newness in science**

The most recent scientific researches reveal a degree of proximity to the above philosophical suggestion. It is said that “the universe itself may be ... pixelated”.

What does it mean?

“Scientists such as Rana Adhikari, professor of physics at Caltech, think the space we live in may not be perfectly smooth but rather made of incredibly small discrete units. “A spacetime pixel is so small that if you were to enlarge things so that it becomes the size of a grain of sand, then atoms would be as large as galaxies,” he says.”

First, what the scientist Rana Adhikari is telling is quite close to what *Infinitism* suggests as “*undimensionality*” of existence. According to this concept, the biggest thing our



anthropic conception could perceive would be a tiny constituent part of an entity and that entity itself would be a minuscule component of a bigger body and then this scaling goes forever and doesn't stop anywhere.

The problem with science is that it works very well up to where it can contain the complexity of matter in its theories and models of explanation. Once the intricacy grows above their restricted frameworks, the scientists lose patience and control. Here is an example of the overwhelming appeal of the reality in face of the obtuse frames of scientific gears.

“Cracking the problem of quantum gravity would be one of the greatest achievements of physics, on par with the two theories that researchers want to merge. Albert Einstein’s general theory of relativity reshaped the view of the universe, showing that space and time can be thought of as one continuous unit, spacetime, which curves in response to matter. Gravity, the theory explains, is nothing more than the curvature of spacetime”.

The general theory shows very well the fact that what it calls spacetime will ‘curve in response to matter’. But as it cannot explain why and how this curvature is caused, it ends up with a kind of mystic formula to express why the matter is able to attract and to curve spacetime.

In order to explain this force that is unknown yet, the theory leans towards speculation and supposes that the curvature is effectively caused by ‘gravity’. But if one asks what gravity is the answer would be it “is nothing more than the curvature of spacetime”.

So the reasoning can be simplified like:

A moves B.

What is A?

A is what moves B.

And, what is B.

B ‘is nothing more than’ what is moved by A.

We are not here to assess the general theory of relativity, but the critical point is a kind of vicious circle and the mystical manner in the gravity is presented. We know that gravity still remains a phenomenon (force) that science presents as an undefined but real and actual power.

And why we have been so frail to explain this force since it had been discovered by Isaac Newton and presented in 1687?

We can detect, in one of the most recent efforts in this field, where is the problematic:

“Scientists generally believe that gravity should be bumpy at the smallest scales; the bumps are hypothetical particles called gravitons. But when physicists use mathematical tools to describe how gravity might arise from gravitons at very tiny scales, things break down”.

And why these mathematical tools are not able to treat gravitons conveniently?

Because “the math become impossible and produces absurd answers such as infinity where we should get finite numbers as answers. It implies

something is amiss’, says Hiroshi Ooguri, the Fred Kavli Professor of Theoretical Physics and Mathematics and director of the Walter Burke Institute for Theoretical Physics”.

The first shocking point in this statement is the preconceived hint on what we ‘should get’ as an answer: “finite numbers”! Astonished, one of Professor Ooguri’s students could ask whether it is not a very basic feature of the impartial empirical approach to circumvent having any pre-construed idea on the outcome of a scientific-methodical research.

Moreover, when start assessing Professor Ooguri’s statement from the infinitist point of view we wonder if he is telling us that because we might have approached the real structure of gravitons, which is like any other phenomenon infinite-, it should be an ‘absurd answer’ and ‘something is amiss’.

In other words, because we would have obtained the realistic explanation of gravitons that leans towards infinite, the

answer should be 'amiss' since this is far from our presuppositions.

In brief, the issue is coming from the fact that gravitons might put our scientists in front of a real case of *infinitude in action*; we experience the effects of this action under the anthropic concept of gravity, but when it comes to treating it structurally and objectively, we are not able to do it since we use mathematics that is not able to cope with infinitude.

We already developed the idea that static mathematics are unable to deal with infinite character of matter and that there is a necessity of having a dynamic mathematics.

Gravitons are just following *infinitude in action* as its inner existential setup, but as we cannot handle it with our timeworn mathematical tools, we just ignore it and fly for the magic land of '*string theory*'. The latter is so attractive but implies many presuppositions that have still a long way to be verified.

The recent experience that is in course of preparation will help a lot for clarifying that anywhere we go and whatever we deal with, in the universe, would be a case of *infinitude in action*.

This is excellently said here:

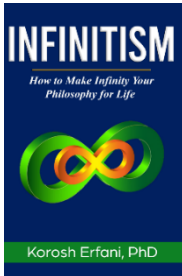
“If I drop my coffee mug and it falls, I’d like to think that’s gravity,” says Adhikari. “But, in the same way that temperature is not ‘real’ but describes how a bunch of molecules are vibrating, spacetime might not be a real thing. We see flocks of birds and schools of fish undertake coherent motion in groups, but they are really made up of individual animals. We say that the group behavior is emergent. It may be that something that arises out of the pixelation of spacetime has just been given the name gravity because we don’t yet understand what the guts of spacetime are.”

Well said! As suggested by *Infinitism*, ‘the guts of spacetime’, here mentioned, and also anything else might be just *infinitude in action*: an entangled combination of infinite

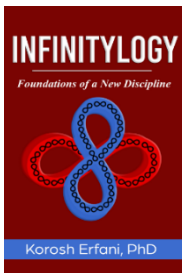
components, infinite interrelations, and infinite ways through which these interrelations take place.

The above scientific approach and its principle idea underpin the clue that the philosophy and the theories like Infinitism are providing; it can provide the premises of a *unifying theory* or as it is said: a *Theory of Everything*. #

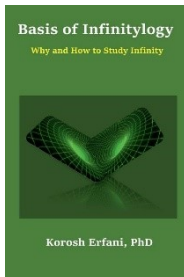
## Books published so far:



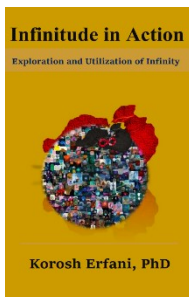
***Infinitem: How to make Infinity your philosophy for life***, ILCP Publishing House, 2021, 375 pages.



**Infinitylogy: Foundations of a New Discipline**, ILCP Publishing House, 2021, 148 pages.

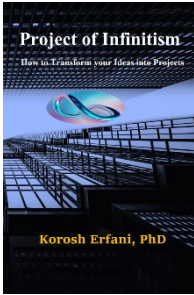


**Basis of Infinitylogy: How and why to study Infinity**, ILCP Publishing House, 2021, 148 pages.



**Infinitude in Action: Exploration and Utilization of Infinity**, ILCP Publishing House, 2021, 200 pages.





**Project of Inffinitism: How to Transform your Ideas into Projects, ILCP Publishing House, 2021, 132 pages.**

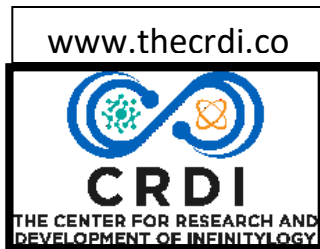
### Our books in other languages



● **Inffinitism: The Philosophical theory to change, (Book in Persian), ILCP Publishing House, 2020, 1018 pages. (possible translation in the future)**



- The CRDI plans translating these mentioned English books in French in the future.



## Our Websites



- Website on the *Center for Research and Development of Infinitylogy* (CRDI)

[www.thecrdi.com](http://www.thecrdi.com)

- Website on the philosophical theory of *Infinitism* and its applications.

[www.infinitism.info](http://www.infinitism.info)

- Website on *Infinitylogy* as a new discipline and its establishment:

[www.infinitylogy.com](http://www.infinitylogy.com)

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