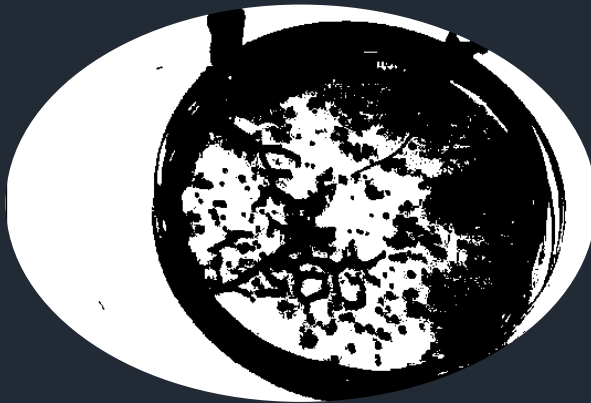


# Randomness and Predictability in the Universe

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## **Introduction**

The philosophical theory of Informatism is one of the most recent examples of this epistemological process in which we transform many scientific evidences into conceptual assertions. While these assertions can and must be verified empirically, each of them opens the way to a new set of experimentation that will, in return, bring about new scientific discoveries or fresh technological endeavors.

Another function of this philosophical treatment of scientific facts is to revise many beliefs that made, tacitly, a comfortable place for themselves in the arena of science. These are the opinions that don't stem from purely scientific work, properly speaking, but they are some thoughts whose impossible empirical corroboration, at present, makes them look like unquestionable facts. In one of our books, we made a review of the Standard Model and showed several

controversial cases of these semi-scientific assertions based on this model.

Here we are going through the concept of randomness and the general acceptance that it means merely accidental, without any logic nor inner predictable rationale.

### **What Randomness means?**

The division comes up as Purposeful and Accidental or Predictable and Random, as two possible categories of action in the universe. While the former suggests the presence of intelligence to foresee or channel a motion of matter, or its transformation, the latter says that things happens haphazardly without any kind of intelligent intervention or plan.

This might be true, but only to some extent. The infinitist epistemology starts to put this general thought in question differently. It suggests that Randomness or Accident in the

existence are not so beyond our interpretation and because of our ignorance of the infinite complexity of the fabric of matter.

The first remark is that what we call haphazard, or the absence of purpose comes from our assessment consistent with the fact that we cannot find a source of purposefulness in the studied set. As we don't see that source, either we attribute it to the randomness, or we try to find an imaginable mysterious source that would be behind all the invisible mechanisms of ordered development for creation and management of the universe.

From an infinitist epistemological contemplation, both approaches are deficient. As regards the absence of the purpose's source, we should be aware that this assessment is based on an observation limited to the superficial layers of a structure. We use the term 'superficial' compared to infinite stratum of the latter. What we see as a 'random'


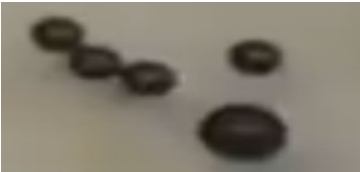

interaction of phenomena could actually be the result of many parameters that are running in the deep levels far from our senses to be seen and taken into consideration.

The inner structure of every phenomenon is made of infinitude in action. This infinity makes that everything is composed of countless components and subcomponents and their endless interactions.

These ways of shaping interactions between components and subcomponents are themselves uncountable, according to *Infinitism*. Therefore, what we call randomness is being shaped through a tripartite interconnection of 1) Infinite components/subcomponents 2) infinite interactions between these components and subcomponents, and 3) infinite ways these interactions are fashioned.

Here, we take the example of a simple experiment of “The behavior of ball bearings as they self-assemble under an electric field... reaching for each other to form emergent structures.”

Let's bring the elements of this simple experience into our model of description for the fabric of matter:

	<p>The components are there.</p>
	<p>Each component is composed of subcomponents and this goes infinitely.</p>
	<p>Components and subcomponents are interacting with each other.</p>

	As their amount is infinite so is the number of interactions among them.
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In the below tracing case study, we can see how variable, apparently unpredictable, and therefore, randomly is the attachment or detachment of a component (the encircled ball bearing) under influence of the electric field.















The situation of the component (the encircled ball bearing) is seemingly moving, changing and determined in an erratic manner under influence of many parameters and forces that are intermingling with each other. We can never predict the above pathway of changes and movement of this element thanks to a simple observation. Such a prediction requires a much more technically accurate observation in the deeper levels of this setting, the levels that are not necessarily accessible by the available knowledge and technology;

however this doesn't mean that we can never reach that degree of technical precision.

The whole thing becomes more complex when we know that the own position of this component is also influencing the adjacent balls bearings, and through them, the whole components of the set. When we imagine the innumerability of the factors that are interrelated in all the echelons of the setting and its components, we can start to have a much better idea of the sense of 'randomness' and 'predictability'.

**The interrogation that changes the things:**

The question is to know how much of this countless number of interactions can be taken into consideration. In other terms, what is the proportion of an infinite quantity  $\infty$ ?

When we know that, next to the infinite, even the biggest number of probabilities our supercomputers can calculate for this quantity is almost nil, we understand better that

there is no way to say how random a move is, in any other way but in an arbitrary and contractual mode.

So, a more realistic approach would be:

- Seeing randomness as a part of a predictable set if we had had the theory and tools of prediction.
- To see prediction as a part of a random set that we know is a portion of a predictable set.

So we can state that:

- Every randomness has a predictable part inside it.
- Every randomness is a part of a predictable set.
- Every predictability has some randomness.
- Every predictability is a part of randomness.

Based on these statements we can say that:

- Every phenomenon is an infinite set of randomness and predictability in the ways its components are interacting to make it be.
- Every phenomenon is infinite interrelated intercreating randomness and predictabilities.
- Randomness is never absolute.
- Predictability is never absolute.
- Each randomness has infinite predictable portions in its inner structure.
- Each predictability has infinite random parts in its internal configuration.

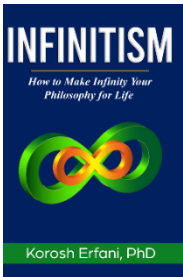
The below scheme tries to summarize this intermingling situation of the randomness in the predictable and the predictable in the randomness. From these infinite entanglements of the two categories is born the whole dynamism that makes a phenomenon exist, evolve, and create other phenomena.



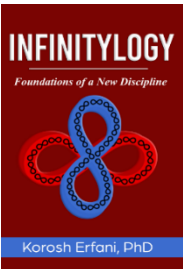


**To conclude**, we can say that predictability and randomness are both highly relative concepts whose sense varies based on the degree of accuracy in our philosophical conception, our scientific observation, and our technological ability. None of these three is trivial since our conception of randomness and prediction is the result of all of these intertwined three points.#

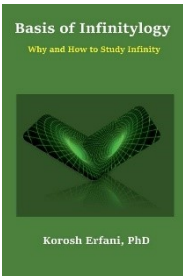
## Books published so far:



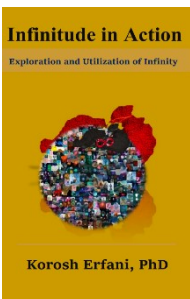
***Infinitism: How to make Infinity your philosophy for life***, ILCP Publishing House, 2021, 375 pages.



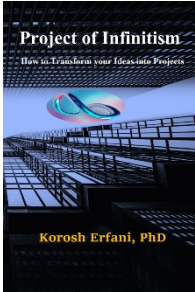
**Infinitylogy: Foundations of a New Discipline**, ILCP Publishing House, 2021, 148 pages.



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

## The Journal of Infinitylogy



**The Journal of Infinitylogy, Volume 1, January 2022, CRDI Publication**



**The Journal of Infinitylogy, Volume 2, February 2022, CRDI Publication**



**The Journal of Infinitylogy, Volume 3, March 2022, CRDI Publication**

## Our books in other languages



- *Infinitism: 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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