

**credits**

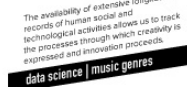
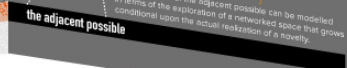
Funded by the John Templeton Foundation under contract n. 51663, the project will run in the period 2014-2017. The main partner is **Sapienza University of Rome** in collaboration with the **Institute for Scientific Interchange (ISI)** in Turin and **CNR Institute for Complex Systems** of Rome.

**credits**

Funded by the John Templeton Foundation under contract n. 51663, the project will run in the period 2014-2017. The main partner is **Sapienza University of Rome** in collaboration with the **Institute for Scientific Interchange (ISI)** in Turin and **CNR Institute for Complex Systems** of Rome.



[www.kreyon.net](http://www.kreyon.net)



**KREYON**  
CREATIVITY AND INNOVATION DYNAMICS

## WHY ARE WE SO INTERESTED IN CREATIVITY AND INNOVATION?

Creativity and innovation are **key elements in the evolution of human societies**, biological systems and technology. They represent the frontier of exploring new solutions in ever-changing and unpredictable environments.

From this perspective, they are becoming progressively **more and more crucial to help both individuals and societies face the challenges of our complex world.**

## IS IT REALLY POSSIBLE TO MEASURE CREATIVITY?

**Not really, actually.** But creative solutions, novelties and innovation share an important feature: often innovative events do not happen by chance: they seem to be triggered by a previous novelty or innovation.

By opening new possibilities, one novelty can pave the way for others in a process that **Stuart Kauffman** has called **"expanding the adjacent possible"**.

**Our aim is to unfold and quantify the underlying mechanisms through which creativity emerges and innovations diffuse, compete, and successful innovations stabilize.**

## NOT QUITE SATISFIED? NEED MORE DETAILS? HERE ARE SOME OF OUR BIG QUESTIONS.

Is creativity an individual process, or is it more social or collective? How can we quantify the value of a new idea? Does creativity require specific constraints? Do creativity and innovation proceed gradually or through large leaps? How several innovations compete - and how does one emerge as the most successful? Why do innovations sometimes fail because they are too far ahead of their time? Can we detect complex triggering processes among innovations, as predicted by the notion of the adjacent possible? Is it possible to identify environments and strategies which foster creativity and innovation most effectively?

## ARE WE USING SPECIFIC TOOLS?

**Yes, we definitely are.** We have a unique opportunity to exploit three specific methods:

- 1** We have the ability to monitor, quantify, and model **human behaviors** at unprecedented resolution and scale, unleashed by the planetary-scale adoption of the World Wide Web, mobile communication technologies, and on-line social networks.
- 2** The **theoretical and modeling tools** recently developed by physicists, mathematicians, computer, and social scientists can analyse, interpret, and visualize complex data sets. These tools have reached a level of maturity allowing us to effectively address the challenges of our era.
- 3** The opportunities of **web-gaming** and social computation offer a new avenue for the study of both individual and social creative and innovative processes, supported by ICT services and communities.

## WHY IS PLAY SO IMPORTANT?

**Play is the fundamental context for most human learning:** activities like exploration, experimentation, and innovation all happen best when we're at play.

The use of games for research purposes - specifically web-based games - is a fast spreading phenomenon, changing the way research activities are conducted and how data are generated in many scientific fields.

**Are you curious about what we do?**

## JOIN US - CONTRIBUTE TO THE KREYON PROJECT

You have a unique opportunity to contribute to the Kreyon project. Visit our website and try our web-based games - **have fun and do science at the same time!**

► [www.kreyon.net](http://www.kreyon.net)