

Science Frontiers and Religion – a Six Part Series
Unit 2: Emergence – please believe your eyes
Guide to the Presentation/Discussion of 8 June 2026

This document may be useful for three types of readers.

The first may have missed the meeting and want to see what it was about. If that is you, see the section titled “Presentation”.

The second may be looking for the references so that they can probe deeper into the topics. If that is you, see the section titled “Notes”.

The third reader may be someone who will reuse the material and offer the study series to a new group of people. For that, see the section titled “Production Artifacts”.

I hope you find what you need.

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[Unit Title: Emergence – please believe your eyes](#)

Emergence is a new frontier of science that is relatively unknown although it engages with the well-known and well-supported study of Biology. The twist is that Biology discusses what exists as if it is just here as a simple obvious fact while emergence strives to understand how matter came alive. This unit begins a three-part discussion related to emergence. The resources for this unit contain references to YouTube video lectures, books and recent magazine articles. You can look forward to European Starlings and Conway’s Game of Life.

[Presentation June 8, 2026:](#)

- Meet and greet.
- Present material for discussion that was prepared ahead of time [here on mp4 video](#).
- Discuss

Notes:

Scholarly Introduction

The video uses a quotation from a scholarly article published in the journal “Philosophical Transactions” written for the Royal Society in England. That article introduces a special journal issue on the topic of Emergence. You can [read that introductory article here](#).

About Game of Life

Intro to Conway’s Game of life with an animation of a glider and a very appropriate observation about the “thingness” of the glider. [See particularly 4:50/5:45](#)

[Tutorial on Conway’s Game of Life](#)

Older but [very interesting animation using Conway’s Game of life](#). Contains examples of dying objects.

The game of life example of an “Eater” comes [from this on-line source](#).

Murmuration of birds

<https://youtube.com/shorts/OMrPKS80nMA?si=6ID0mKISfiWHmvMh>

Sabine Hossenfelder videos

These are referenced to physics and may suffer from that with a general audience.

[What is Reductionism?](#) (5 min) A bit tedious and confusing in parts.

[What is emergence? What does "emergent" mean?](#) (5 min)

[The Biggest Gap in Science: Complexity](#) (19 min)

Sante Fe Institute

[Obituary for Murray Gell-Mann](#)

[Overview of the Mission](#)

[List of books on complexity](#)

Books:

I’m reading: **“Beyond Physics: The Emergence and Evolution of Life”** by Stuart Kauffman (2019)

Also see list of books above (under Sante Fe Institute) that were selected by the Sante Fe Institute

Production Artifacts:

The video for this unit was produced in Powerpoint in three sections which were then combined with iMovie. This cumbersome procedure was motivated by some difficulty in dealing with embedded videos.

The parts of the Powerpoint presentation are here: [Part 1](#), [Part 2](#), [Part 3](#) and the script for these is [this single word document](#).

This document you are reading is found in this [Word File](#).

There is a high probability that your web browser cannot open the links above to any PowerPoint file. If that happens, use the web browser to open [the file folder on Google Drive](#).

Then, look for the following files and download them to your system:

EmergencePt1.pptx

EmergencePt2.pptx

EmergencePt3.pptx

Emergence Script.docx

[This file](#) is "SFR Unit2 Guide.docx".

The scholarly article from the journal "Philosophical Transactions" is file emergent-phenomena-in-complex-systems.pdf

The following fragments of video may be useful in revising the PowerPoint: