# Article information:

Emergence as the conversion of information: a unifying theory | Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences
<https://royalsocietypublishing.org/doi/full/10.1098/rsta.2021.0150>

# Article summary:

1. Reductionism is a classic principle of science, but it contradicts the practice of science.

2. A formal theory of emergence can be used to compare microscales to macroscales and measure information gain above and beyond compression.

3. Measures like effective information and integrated information can be used to identify the most causally relevant scale in a system.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article provides an interesting perspective on the contradiction between reductionism and the practice of science, proposing a formal theory of emergence as a resolution. The article is well-written and provides clear explanations for its arguments, making it easy to understand for readers with different levels of knowledge on the subject matter.

The article does not present any potential biases or one-sided reporting, as it presents both sides of the argument fairly and objectively. It also does not contain any unsupported claims or missing points of consideration, as all claims are backed up by evidence from previous research studies. Furthermore, there are no unexplored counterarguments or promotional content in the article, as it focuses solely on presenting its own argument without attempting to promote any particular viewpoint or discredit other perspectives.

The article does mention possible risks associated with its proposed theory, noting that further research is needed to determine whether its conclusions are valid in all cases. However, it could have done more to explore counterarguments and present both sides equally by providing more detail on alternative theories that have been proposed in this field. Additionally, while the article does provide evidence for its claims, some readers may find that more evidence is needed before they can accept its conclusions fully.

In conclusion, this article provides an interesting perspective on the contradiction between reductionism and the practice of science and presents a formal theory of emergence as a resolution. While it does provide evidence for its claims and mentions potential risks associated with its proposed theory, it could have done more to explore counterarguments and present both sides equally by providing more detail on alternative theories that have been proposed in this field.

# Topics for further research:

* Reductionism vs. Emergence
* Reductionism in Science
* Formal Theory of Emergence
* Alternative Theories of Emergence
* Risks of Reductionism
* Evidence for Reductionism and Emergence

# Report location:

<https://www.fullpicture.app/item/d4358d82538191e131bf47cc90e5d90b>