# Article information:

PSE prospective: Paradigm transition towards Complex Thought in a global world under pressure - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0098135423001448>

# Article summary:

1. Process system engineering (PSE) research activities need to transition towards a paradigm that is better suited for addressing the complexity of global crises.

2. PSE practices should revisit methods and epistemological postures towards constructivist's Complex Thought paradigm.

3. A participative PSE process in line with a constructivist posture is proposed to investigate systems in transition and head towards sustainable and desirable solutions for people.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "PSE prospective: Paradigm transition towards Complex Thought in a global world under pressure" explores the role of process system engineering (PSE) in addressing global crises related to climate, energy, environment, water, and food. The author argues that while PSE has contributed to mitigating the consequences of these crises through energy savings and process intensification, its trend towards over-mathematizing complex social and environmental issues is inadequate. The article suggests that PSE practice should revisit methods and epistemological posture towards constructivist's Complex Thought paradigm.

The article provides a comprehensive overview of the challenges facing the world today and highlights the need for a paradigm shift in PSE activities. However, it is important to note that the author's perspective may be biased towards constructivist epistemology and participative approaches. While these approaches may be useful in some contexts, they may not be appropriate or effective in all situations.

Additionally, the article does not provide sufficient evidence to support some of its claims. For example, it suggests that local energy savings may not be meaningful on a grand scale without providing any data or analysis to support this assertion. Similarly, it criticizes Cartesian reductionism without acknowledging its potential benefits in certain contexts.

Furthermore, the article does not explore counterarguments or alternative perspectives on some of the issues it raises. For example, while it acknowledges that PSE has contributed to solving problems in various domains, it does not consider whether other disciplines or approaches could also play a role in addressing global challenges.

Overall, while the article raises important questions about the role of PSE in addressing global crises, it would benefit from more balanced reporting and a more thorough exploration of alternative perspectives and potential risks associated with proposed solutions.

# Topics for further research:

* Alternative approaches to process system engineering for addressing global challenges
* Critiques of constructivist epistemology in problem-solving
* Benefits and drawbacks of Cartesian reductionism in complex problem-solving
* Interdisciplinary approaches to addressing climate
* energy
* environment
* water
* and food crises
* Case studies of successful PSE interventions in global challenges
* Risks and limitations of participative approaches in complex problem-solving.

# Report location:

<https://www.fullpicture.app/item/685172e1b999f1f2d479c11a1d5d2190>