

Preliminary Notes 1.

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Abstract.

Relatively unstructured expression of some preliminary thoughts about how a priori explanatory models of dynamic complex systems might be constructed outside of a canonical approach.

Body.

A canonical approach consists of inference that strictly follows from precisely defined concepts, or spatio-temporal maps, the variation from which is some kind of confounding error to form a new hypothesis.

If precision, whether of a concept, or a mathematical relation, is not retained from one state of a system to another, then the canonical approach does not capture what is relevant (if there is a sense in which a system incorporates a model of itself, so there is some kind of repetition or homeostasis that can't be explained through a continuous model).

What might questions associated with a non-canonical approach be?

Defining where an analogue representation of a system within itself is possible (different dependencies of variables tending to be separable).

If there is no possibility that these are separable, and an analogue representation of a system within itself cannot occur, then a system of coded representation would be necessary for a system to maintain these characteristics of homeostasis or repetition.

As such, if a coded representation of a system are necessary within the system this may be explained by a mathematical model which answers the question of when differing dependencies of variables are separable.

The inferential relation between parameters affecting the model may provide a guide for which principal components to look for in the data from such a system (this guide being a mathematical rather than a conceptual heuristic)

