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Jul 20, 2024 • 22 tweets • ki_cog/status/1814576208031387814

[Scybernethics: Downward Causation & Emergence through Attentional Grids]

In scybernethics, top-down and bottom-up modeling are always coupled through a co-determining hermeneutic and heuristic circulation.

The conception of theories and models as "attentional grids" is key.

Here's an explanation of how these concepts are interpretated by using this approach:

1. Theories and models as attentional grids:

In scybernethics, theories and models are viewed as ways of seeing and thinking - essentially "attentional grids"

that shape our perception and understanding of phenomena. This concept emphasizes that our theoretical frameworks actively influence what we observe and how we interpret it.

2. Emergence through the attentional grid:

Emergence, in this context, can be seen as the recognition of new patterns or properties that become visible when we apply a particular attentional grid.

It's not just about phenomena arising from lower-level interactions, but also about our cognitive ability to perceive and conceptualize these new patterns.

3. Downward causation as a shift in perspective:

From the scybernethics viewpoint, downward causation might be understood as the way our higher-level conceptual frameworks (attentional grids) influence our understanding and interpretation of lower-level phenomena.

It's a form of cognitive feedback where our models shape what we perceive at more fundamental levels.

4. Circular causality:

The scybernethics approach emphasizes the circular nature of causality in complex systems. The attentional grid concept highlights how our understanding of emergence and downward causation

are part of a reflexive process where our models both shape and are shaped by our observations.

5. Self-reference and observer inclusion:

By framing theories as attentional grids, scybernethics explicitly includes the observer in the system being observed. This aligns with the second-order cybernetics principle of including the observer in the observation.

6. Dynamic interplay:

The relationship between emergence and downward causation in this framework is seen as a dynamic interplay between different levels of abstraction in our attentional grids.

Lower-level interactions give rise to emergent properties, which in turn influence how we conceptualize and attend to those lower-level phenomena.

7. Cognitive enaction:

This perspective aligns with the enactive approach in cognitive science, suggesting that our understanding of emergence and downward causation is not just about objective phenomena,

but also about how we actively construct and enact our cognitive world through our theoretical frameworks.

8. Flexibility and adaptability:

Viewing theories as attentional grids allows for greater flexibility in understanding complex phenomena.

It encourages shifting between different perspectives or "grids" to gain a more comprehensive understanding of emergent properties and causal relationships.

9. Ethical and pragmatic implications:

This approach has ethical implications, as it emphasizes our responsibility in choosing and developing the attentional grids we use.

It also has pragmatic value, encouraging us to be more aware of how our theoretical frameworks shape our understanding and to actively explore alternative perspectives.

9. Integration of levels:

Finally, this scybernethics perspective promotes an integration of different levels of description, recognizing that emergence and downward causation are part of a unified cognitive process of making sense of complex systems.

In summary, the scybernethics perspective on downward causation and emergence, viewed through the concept of theories and models as attentional grids, offers a nuanced, self-reflexive approach to understanding these phenomena.

It emphasizes the active role of the observer and their conceptual frameworks in shaping our understanding of complex systems and their causal relationships.

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