

Section cut from plan/sample submitted to Matt, December 2019

1.

Diffraction and Entanglement

'The absence of determinism at the small scale is intrinsic to nature.'

(Rovelli, 2017: 104)

'Indeterminism is an undoing of identity that unsettles the very nature of being and non being.'

(Karen Barad, 2018 double check quote and video Youtube)

Find quote about structure visible in language

Nicholas Christakis, author of *Blueprint: The evolutionary origins of a good society*, (2019) writes ‘...by the middle of the eighteenth-century, the long-standing intellectual framework of separation had started to face significant resistance.’ (2019: 396) But a quarter into this century there doesn’t seem to be a single, universal alternative, which exists in its own right to describe a non-Cartesian reality. This may be structurally unavoidable. However, disciplines expanding and collapsing new and old ideas are contained within the term **systemic**. It is a useful multi-encompassing way of describing a rhizome-patterned way of conceiving reality. Systemic describes an interdisciplinary collection of views and theories which spreads advantageously through science and culture, mostly suggesting a lively and inter-relational universe, which incidentally may be far stranger than we ever imagined. Perhaps we are still in the relative infancy of this new paradigm. Fritjoff Capra and Pier Luigi Luisi, authors of *A Systemic View of Life*, suggest many institutions in particular are failing society due to their ignorance of a systemic emerging worldview (2014). Kathryn Hayles, however, says even though many of us aren’t aware of it, we have nevertheless begun internalising its movements via the flickering signifiers that transfix us daily as we use technology – which does not operate in a top-down fashion. The flicker lets us know, even if only unconsciously, there are endless possibilities, and events are not determined. (ibid: 30) Rather they are dependent on relational actions - unlike fixed letters on a printed page.

Technology’s anatomy is informed by a blend of Cartesian and non-Cartesian interdisciplinary approaches to research and practice¹. Questions arise when comparing these two paradigmatic descriptions in cybernetics, biology, ecology,

¹ For example – click on a bit of code here, and you are sent to a page where there may be several more possibilities to click to – leading to more and more and so on, the screen is, nevertheless, divided into a linear numerical sequence of pixels based on analogue TV screens and arranged in an array which can be conceptually unfolded into a straight line – which is the antithesis of a non-Cartesian interconnected web of rhizome-like connections and threads.

Sarah-Jane Field 19/12/2019 05:52

Comment [1]: Does this need quotations from the book - also opens up questions about Lacan/floating signifiers/absence/presence – pattern/randomness and see page 25/30 of Hayles’ *Posthuman*

chaos theory and quantum theory amongst others. (1999) (Field, 2018 and 2019). This approach queries arbitrary lines and induces concern over, for example, the idea of race, species, and the self. Even though we may not be cognisant of it we're embodying and internalising new ways of being when we interact with our technology, which can lead to internal and structural conflict. The habits and practices of the old ways are deeply embedded and, as may be evident by the apparent chaotic state of the world today, we seem to be in a period of intense flux which could be seen as an expression of the end of one system and the birth of another. Henry Timms and Jeremy Heimans tell us in their book *New Power* (2018), 'We are changing. Our behaviours and expectations are changing.' They suggest the technology we use daily doesn't beget a fixed, top down, hierarchical power structure. Instead its anatomy and movements are based on relational responses and abundant probabilities, and therefore engender interrelated, lively, relations between individuals, groups and non-human actors. Institutions, which distrust this evolving reality, will, according to Timms and Heimans, struggle to exist and fall by the wayside. Both bad and good actors have taken advantage of new power.

It's difficult to find reliable contemporary writers (reliable being key) who disagree that the Cartesian world is transforming for better or worse and that we are entering a new epoch, but there are those who argue reality is not only process-driven, that objects are real, and we are most certainly not living in some sort of information-informed illusion. Objects are key for Graham Harman (Object Orientated Ontology) (2013) – they exist as things in their own right but he agrees with other aspects of non-Cartesian thought such as an outright rejection of human (white, Western, male) exceptionalism thought to be promoted by the older view. Ian McGilchrist (*Master and his Emissary*, 2019) also believes that reality is a blend of objects and process but rejects simplistic binary systems in favour of interconnected complexity. It is also useful to consider how people with opposite ideologies to one's own rely on systems theory to **argue their case**.

Sarah-Jane Field 19/12/2019 05:52

Comment [2]: Do I need to actually mention Dominic Cummings and his paper on education here? Using Professor R. Plomin's research (Blueprint, 2018) which has been accused of skirting too close to eugenics, Cummings argues that is not worth wasting money on trying to alter what cannot be changed, due to faulty genetic coding.