

Picturing the Invisible:

Emerging themes

Paul Coldwell and Ruth Morgan, 02 August 2021

Interpretation

How we interpret what we can and cannot see is a strong theme that connects across each discipline within the network. Where there is invisibility there is ambiguity of meaning which presents opportunities for exploration and curiosity, but also the need for conversation.

Art and science are often juxtaposed, setting creativity in contrast to analysis, picturing in contrast to imaging. Yet this is an artificial construct and a core theme that has developed from the workshop is that of symbiosis. No discipline can operate within a vacuum, and making connections across different fields and viewpoints (ways of seeing) is integral to understanding better the unknowns and ambiguities that are observed or predicted. Developing connections and a way of articulating ambiguity is a foundation for being able to see the context and consider a topic in a holistic way.

Addressing uncertainty is also a key attribute of interpretation. Creating space for exploration and observation where it is possible to be comfortable with uncertainty is relevant for all disciplines, and key to taking the holistic approach to 'seeing'. It also opens up new opportunities to consider what is created by uncertainty in different domains.

Communication and language

Knowledge is dynamic, and ways of seeing are constantly developing. Therefore, to develop a deeper understanding and appreciation of the different approaches and tools that grapple with the invisible (known and unknown) there needs to be an ongoing conversation. A conversation that transcends disciplinary boundaries requires a common language (both verbal and non-verbal) to explore how different

approaches and conceptual constructs can be applied in non-traditional ways in different disciplines. The way we communicate across boundaries needs to be considered with different audiences in mind, and also in terms of taking into account a fuller understanding of the contexts (priors) that exist that shape viewpoints and experience.

Interdisciplinarity

The term interdisciplinary is widely used in varying and disparate ways. There appears to be an opportunity when considering core themes that transcend traditional disciplinary boundaries, and the ways of communicating across those boundaries, to address the concept of interdisciplinarity. A language or lexicon is critical to this endeavour so this theme is closely allied to 'communication and language'. There is potential to identify not only a valuable dictionary of terms but also case studies of good practice from across the network.

Negative based

A core idea that has emerged is that of the information that is embedded in absence - the practice of prediction in astrophysics, and the value of voids in art are just two examples. This is connected to the observation that it is often necessary to peel back layers, and remove certain things in order to reveal the invisible (such as in surgery), and to then consider what is lost when things are removed. It is therefore important to be considering how we select, abstract and re-present what is observed, and the appreciating the value of reflecting on how a change of focus can bring new attributes into view.

Invisibility of people

Allied to this theme is the importance of recognising those who are absent, whether that is in contemporary art, the use of AI systems, or teasing out observed attributes from human judgement and decision making in forensic reconstructions. The absence of voices, cultures and people in a narrative can reveal insights into the prevailing paradigm, salient contexts and what we choose to see.

Tools

There is an art of performing science, and science in the creation of art.

Traditionally in both art and science the use of tools was learnt by imitation. More recently, there has been a shift toward learning in a more conceptual way, for example the use of figures in textbooks for understanding anatomy. The tools that are used in creation and production of science and art are increasingly seen as instruments, rather than an extension to the body. This has an impact upon the type of knowledge that we seek, with explicit forms of knowledge often being considered more valuable than tacit forms of knowledge. Yet exploring 'the doing' reveals the value of achieving a balance between these two types of knowledge. A consideration of performance is valuable to this end. It offers the potential to appreciate the ambiguous, and address the new challenges that new tools are increasingly creating (such as 'big data', the increasing resolution of imaging, and the capabilities enhanced technology bring).