AFFORDANCES OF THE NETWORKED IMAGE

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The networked image is framed analytically as an expansive onto-epistemological apparatus, a relational socio-technical assemblage, which both limits and creates possibilities for how and what can be thought/known and imagined within it. This is the starting point for our enquiry, through which the networked image can be understood as constituted in the material and social bases of computing, in which infrastructures, codes, algorithms, and bodies are the conduits. Through interactions between humans and machines, the networked image is also a relational object with performative agency (and as such, it can also move or exist beyond the computational). The networked image is a cooperation between the quasi-autonomous operations of software and remediated socio-cultural forms. In this sense, the networked image is multimodal and transmedial, and importantly, it presents a specific manifestation of network relations. A networked image emerges through the network; its existence is intricately entangled and intertwined with software, hardware, code, programmers, platforms, and users. Its distribution process makes the structure, dependencies and meaning of the networked image visible. By following such circular processes, a network, or a state of being networked, enables the image to exist, but is also a constitutive act. These acts are constructed through a complex, intricate, and interrelated system of networks that presents an assemblage of visuality, technology, politics, and social relations.

The research problem we are concerned with is formed around understanding what the limits as well as the possibilities of the networked image are within different knowledge fields and practices. **(Fig. 1)**

The term "network" is complex enough, subject to constant slippages in frames of reference and everyday use, and the same holds for the term "image," although more enigmatic in its conceptual and methodological framing. In non-representational discourse the term "image" has acquired a number of highly specific qualifications in order to avoid the reductionism implicit

COMPUTATIONAL (electronic)	HYBRID (medial)	EMBODIED (biological)
ALGORITHMIC (mathematical)	NETWORKED (cultural)	RELATIONAL (connected)
DATA (signaled)	SEMIOTIC (historical)	SPATIAL (immanent)

Fig. 1
Schematic of the dimensions of the socio-technical image assemblage
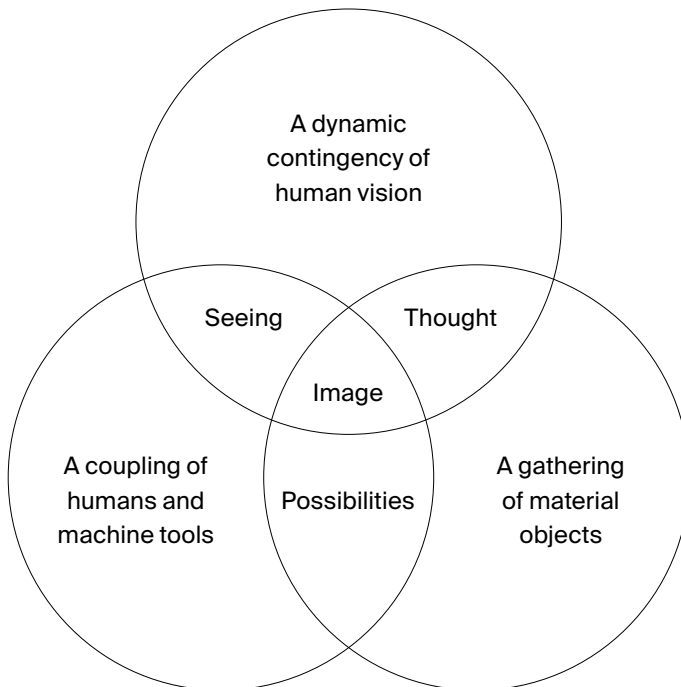
Fig. 2
Schematic representation of the networked image

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in the term "digital image." Critical studies have defined the new conditions of the image as algorithmic, computational, operational, poor, nonhuman, technical, and even soft. However, none of these terms taken on their own merits meet the threshold of the socio-technical image assemblage, but rather, taken together, they contribute to a model of its dimensions as simultaneously a technological infrastructure and a dynamic of social relations. The image is materially out in the world, and it is also a mental and embodied process. We define the image in network culture in three overlapping ways: as a dynamic contingency of human vision; a received historical gathering of material objects embodying that which has been thought and seen; and a new form of social relations between humans and machines, in which machines also make images for other machines. In the first sense, the image shapes what is possible to observe and to think; in the second sense, images are material inscriptions of what has been observed; and in the third sense, they are non-representational forms of calculable data. **(Fig. 2)**

While we approach the image primarily as computational, it is also semiotic. But the contemporary semiosis of the networked image cannot be simply approached through a twentieth-century doctrine of signs. We recognise processes of signification are being colonised and re-organised under global capitalism through processes of extraction, abstraction and the financialisation of culture. This is the paradox of the image as it is based upon a non-representational socio-technical system but is made humanly understandable through representation, in which the representational and non-representational are mutually dependent and cannot obliterate each other, as representation becomes cannibalised and operationalised by computation. Our research has attempted to prise open the representational paradox by focusing upon particular aspects of the networked image, such as: major shifts in the register of scale; incremental automaticity in machine vision; chrono-reflexivity in response to multiple temporalities; and interactive generative representation.

The instrumentalisation and operationalisation of representation by computation calls for a re-assessment not just of scholarly methods, but of fundamental institutional practices in organisational thinking, skills development and pedagogies. It is in light of the need to study and intervene in the networked image in radically different ways that CSNI was formed, founded upon the principle of collaborative partnerships with independent

cultural institutions facing direct challenges about their online offer. The logic of our position on the changed social relations and cultural form of the networked image necessarily extends to consider the challenge of how knowledge is produced, circulated and shared in the network. We are interested in the possibilities for network knowledge which is not instrumentalised by data, in how the networks of sharing knowledge are to be identified and connected, and in a central question of network knowledge, which is how to acknowledge and include the network user. There are therefore two related sets of problems to grapple with: on the one hand, there is the need to understand how computational capitalism is restructuring cultural value, and in particular visual cultures; on the other, how to undertake research in the face of neo-liberal restructuring of knowledge production. Representation is a political issue, because in its analogue forms, it offered the socially structured means of communicative value, albeit a hierarchical one, but with the Internet and computation, all that has changed by virtue of a non-representational system in which representation is simulated. Representation/non-representation is the puzzle to solve and the binary to overcome, and the network image is, we argue, at the centre of it. Moreover, it is increasingly ludicrous that in the university, computer science is busily developing automation through AI, while the humanities are busily trying to establish the new social relations of computing. One of the fundamental boundaries to be overcome is that between the arts and the sciences, and in this case, between computer science and cultural theory. Such a situation calls for a high degree of reflexivity as well as strategic and tactical thinking on how to operate within but ultimately escape the confines of the disciplinary boundaries. This is why we say that how knowledge is practiced is crucial for understanding the networked image, just as we assert that the networked image is a relational object. The conceptual distinction between ontology and epistemology ultimately breaks down when considering the networked image. Practices of knowing and being are mutually implicated.

A new approach to knowledge production is particularly urgent for critical cultural theory, because the restructuring of knowledge and understanding threatens its existence as criticality is rolled into the neo-liberal commodification of traditional humanities. It seems that the more critical analysis there is, the less it affects anything beyond itself. Knowledge is functionalised by homogenised datafication and this is the same logic which is restructuring the visual in culture and cultural

value in general. Why the related problems of knowledge and understanding of visual culture matters beyond the university is because they are a symptom as well as a cause of the political and social crisis of representation in which the social development of European liberal democracy has been halted. It is a crisis whose manifestations can be found in hyper-individualism, de-unionisation, and privatisation of public services, in which marketing becomes all-encompassing.

The question becomes how any knowledge formation extends in networks, who recognises it, who the knowers are, and what they do with such knowledge.

RESEARCH QUESTIONS

For the way knowledge is produced:
◊ What arrangements between institutions and networks facilitate open and shareable knowledge?
◊ How do we design methodological approaches that work with networks?
◊ In what ways can network knowledge be translated into democratic political agendas?

For the object knowledge seeks to understand:
◊ In what ways has network computing changed established European, and now global, cultural ways of seeing?
◊ What are the affordances of the network image in thinking about contemporary vision and visualisation in culture?
◊ How does understanding contemporary visual cultures aid struggles for equality and liberation?

It is beyond the limits of this short positioning paper to do more than gesture towards these questions, which stand as the agenda of larger and ongoing research projects. The opening argument made here is that the preliminary task is one of translating critical perspectives on the visual in computational culture into open ways of producing knowledge to support a progressive socio-cultural politics of public culture. As a starting point, we argue that the networked image affords a view of what is politically at stake in the socio-cultural realms and in the production of knowledge, and how that could be taken up in public education at all levels. To make the socio-technical image assemblage intelligible, research and scholarship need to redraw the boundary of the object, leading to an inter/transdisciplinary and transmedial approach. Images need to be understood as relational entities which call for a new

account of culture and visual aesthetics, one which no longer relies upon the terms and terminology of either art or media fields. Our task to understand the networked image attempts to hold together and work across theory, practice and policy, and to do this in collaboration with progressive individuals and collectives who work with the assemblage to ensure a more democratic and resilient future.

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CENTRE FOR THE STUDY OF THE NETWORKED IMAGE (CSNI) was established at London South Bank University in 2012 to promote research into how the Internet and related technologies were impacting upon cultural value in civic and public sphere. CSNI's first research programme focused upon three interrelated aspects of cultural reproduction: the photographic image, digitisation of museum collections, and emerging forms of curating online. Over the ensuing period, CSNI has supported a range of research projects, which in one way or another converged upon computational systems of visualisation. In 2019, as a result of this gathering of interests upon the computational in culture, CSNI developed a more specific focus upon machine ways of seeing in which the networked image has become more obviously the centre of interest. https://www.centreforthestudyof.net/