Jussi Parikka

Operational Images: From the Visual to the Invisual

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Once upon a time, there was the operational image. We all remember Harun Farocki's epochal essay and video essay (2003) on the filming of the bombing of Baghdad from the warheads of Cruise missiles during the first Gulf War. According to Farocki, that was the moment when the history of technical images swerved sharply, taking a path that seemed completely new at the time: from being tools for representing the world, digital images enhanced by algorithms became agents that modified it by intervening on reality, in that case with destructive results. In the years that followed, much emphasis was placed on this new condition of the image, starting with two landmarks of Farockian studies: the intervention of the artist Trevor Paglen, who announced a future in which images would increasingly be created by machines for other machines, without passing through the eyes of humans (2014), and the contribution of the leading Farocki scholar Volker Pantenburg (2017), who, while considering the iconic appearance of operational images to be misleading (simply "a gesture of courtesy extended by the machine" to humans), relaunched what Farocki originally conceived of as an archaeology: operational images do not originate with the digital turn, Pantenburg wrote, they have a much longer genealogy that needs to be reconstructed.

This need is met by Jussi Parikka's new volume, which stems from the project "Operational Images and Visual Culture", hosted by the Department of Photography at FAMU at the Academy of Performing Arts in Prague. *Operational Images: From the Visual to the Invisual* is an extraordinary map of the present that revolves around the status of algorithmic images, their philosophical potential, and their economic and political role. This book brings together many of the key objects of contemporary research, uniting them under a single heading, but above all it has the merit of elaborating the necessary conceptual tools with which to analyse them. From astronomical images to driverless cars, from gesture recognition to predictive algorithms, from smart urbanism to Lidar as the basis of a new filmic and photographic imaginary, from contemporary satellite Earth observation techniques to geolocation: all are part of the current data economy that finds its keystone in the operational invisuality.

Operationality, operativity: Parikka puts this important concept to the test in the present, making it work and fully demonstrating its heuristic value. To operationalise is not to produce or create, one reads, but to mediate, to connect, to take from one level to another, to move, to dislocate, to mobilise, to model: for

example, to connect the symbolic and the real, the present and the future, the visible and the invisible, the abstract and the concrete. It is through these connective acts that images can now be recognised as a fundamental link in our political economy, provided they cease to be thought of as static, defined objects with a specific existence and a precise spatio-temporal location. Images do not have to be seen through the "embodied perceptual system of the human being", the author writes, and yet it would also be wrong to reduce them to mere data, to see them as a stream of numbers that stops for a moment on some support and then starts flowing again. The notion of support is no longer valid, and it seems that Parikka contrasts it with that of platform, the place where data is processed and *formatted* (another crucial word in the book). The "platform as a central feature of capitalism, political geography, and digital culture", a place where we create access to the world, establish ways of knowing it by creating diagrams of meaning (i.e. abstract skeletons of the visible/knowable), maps by which we orient ourselves, separate things, create orders of importance.

What one learns from the book, then, is that the iconic (in a generic sense) aspect (if any) of today's technical images is certainly less important than the scaffolding that supports them, the infrastructures that bring them up to date, those platforms on which old photographic or video recordings crumble apart and reassemble, rewrite and reorganise themselves, eventually returning to resemble what they were but after an irreversible leap in degree and quality.

Parikka succeeds in looking at the phenomena he describes from above, and from this angle he unifies a subject that appears very heterogeneous and fragmented at close range. But despite this meta-reflexive character, the book draws you in with its lucid traversals, animated more by great political and philosophical questions than by the need for specific in-depth study. The reader reflects on the idea of algorithmic image making as an act of the second degree, as an

intervention on very different signals gathered by instruments that do not necessarily involve an optic and a lens that simulates human vision. And it turns out that this is nothing new, just think of certain 19th-century machines for processing light, such as the Fraunhofer spectrometer, invented in 1810 and already capable of making non-representational "observations". Within this archaeological media path, Parikka introduces a major theme of contemporary visual culture studies, namely the current exploitation of the entire electromagnetic spectrum for the purpose of image-making. What is the point of this broadening of the field of operation, this extensive capitalisation of invisible light, once of interest only to astrophysicists? The fact is that the metric, or photogrammetric, function of photography—if it is still to be retained as a reference image— has finally prevailed. The mathematisation of the image goes back to perspective, writes Parikka, "a system for compressing data on a flat surface", but when Meydenbauer's photogrammetry is grafted onto this Renaissance technique, the relationship between data and the senses is clearly revealed, as already explained in 1988 by Farocki in his masterpiece (*Images of the World and the Inscription of War*).

The resumption of this very important point of Farocki's reflection—which we fully understand more than thirty years after Farocki's first insight—also becomes for the reader an exercise in looking. One finally accepts that also a classical photograph, full of evidence, can be seen simply in its lines of force, which we can perceive as the machine does, as a "tableau of information", a surface of measures, a drawing of recognisable relations. With this exercise of the gaze, the metric question, central to studies of science and photography (such as those by Kelley Wilder), becomes much more than a theory. In fact, this exercise has a political potential, since it is an operation carried out on the symbolic, but all outstretched towards the real. By translating the world into numerical ratios, the image becomes a force that bends the field of perception and

ultimately of power in a certain direction. By transforming seeing into counting, into grasping the statistical distribution of the properties of objects in order to fix it and circulate them, one influences the real world, and also *formats* the environment, as Parikka writes. Humans today are immersed in environments created by this endless series of "centres of calculation" that disseminate patterns and instructions, and it is their deeper logic that we urgently need to confront.

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