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HOW MACHINES SEE THE WORLD: UNDERSTANDING HOW MACHINE VISION AFFECTS OUR WAY OF PERCEIVING, THINKING AND DESIGNING THE WORLD

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We share the world with machines and technology in a man / machine relationship that is increasingly marked by empathy and reciprocity. This relationship has gradually assimilated human vision with the way digital devices see (machine vision). Machines see the world in various ways and how they see the world affects how we see it. *Ways of seeing* (Berger 1972), and therefore thought and design, seem to meet machines' needs. The plasticity and malleability of human beings have been deliberately used to create a new world thought and designed to be shared with machines. The objective of my proposal is to understand the extent to which machines' views of the world influence those of humans, using the definition of the unconscious. Importantly, the term 'see' is used in a broad sense. It should be understood as a *visual skill* (Baxandall 1988) rather than as a mere human retinal impression.

Although Walter Benjamin's (1931) notion of the *optical unconscious* particularly suits the reality of the late 19th and early 20th centuries, Franco Vaccari's (2011) notion of the *technological unconscious* defines the second half of the 20th century. However, these definitions no longer seem appropriate in the complex contemporary situation in which technology has become more and more ubiquitous and hidden behind interfaces and infrastructures that are themselves invisible to and detached from our eyes (i.e. seamless technology like Radio Frequency Identification or RFID, used to identify and track objects at a distance. RFID technology, for instance, is used in the London Oyster card to access and calculate fares for public transport. Unlike a barcode, to be identified, an object does not need to be placed under the direct view of a reader. At a certain distance, the reader automatically identifies the object). According to Matt Ratto (2007, 20), invisibility

creates 'a particular kind of passivity and lack of engagement between people and their actions and between people and their social and material environment'.

Thus, a new notion of the unconscious that better reflects these new properties and technological qualities is necessary. I propose the notion of the *electromagnetic unconscious*, which better describes this new kind of vision (mechanical and invisible) and requires a new concept of its influences on humans. Unlike previous notions of the unconscious, the electromagnetic unconscious is always hidden because it never manifests itself in any way. It is invisible to our eyes, which are unable to see the electromagnetic spectrum (e.g., wireless technology). This results in a double reality shared between the expectations of our optical-nervous system, shaped over millions of years of evolution, and the new technological reality that is only understandable by and visible to machines, which historically marks the end of the anthropocentric monopoly of vision.

Becomes thus a challenge to understand these technological systems, which were thought and designed to be invisible, because their invisibility prevents us from formulate any form of dissent or critical thinking.

REFERENCES

Franco Vaccari, *Fotogra a e inconscio tecnologico*. Milan: Einaudi, 2011.

John Berger, *Ways of Seeing*, London: Penguin Classic, 2008.

Matt Ratto, "Ethics of seamless infrastructures: Resources and future directions". *International Review of Information Ethics* 8 (2007): 20.

Michael Baxandall, *Painting and Experience in 15th century Italy*. Oxford: Oxford University Press, 1988.

Walter Benjiamin, *Piccola storia della fotogra a* (italian trans. of *A Short History of Photography*), Milan: Skira Rizzoli, 2011.