

MA **XXI**

Imaginaries and Visions
in the Age of Artificial Intelligence

World of Art

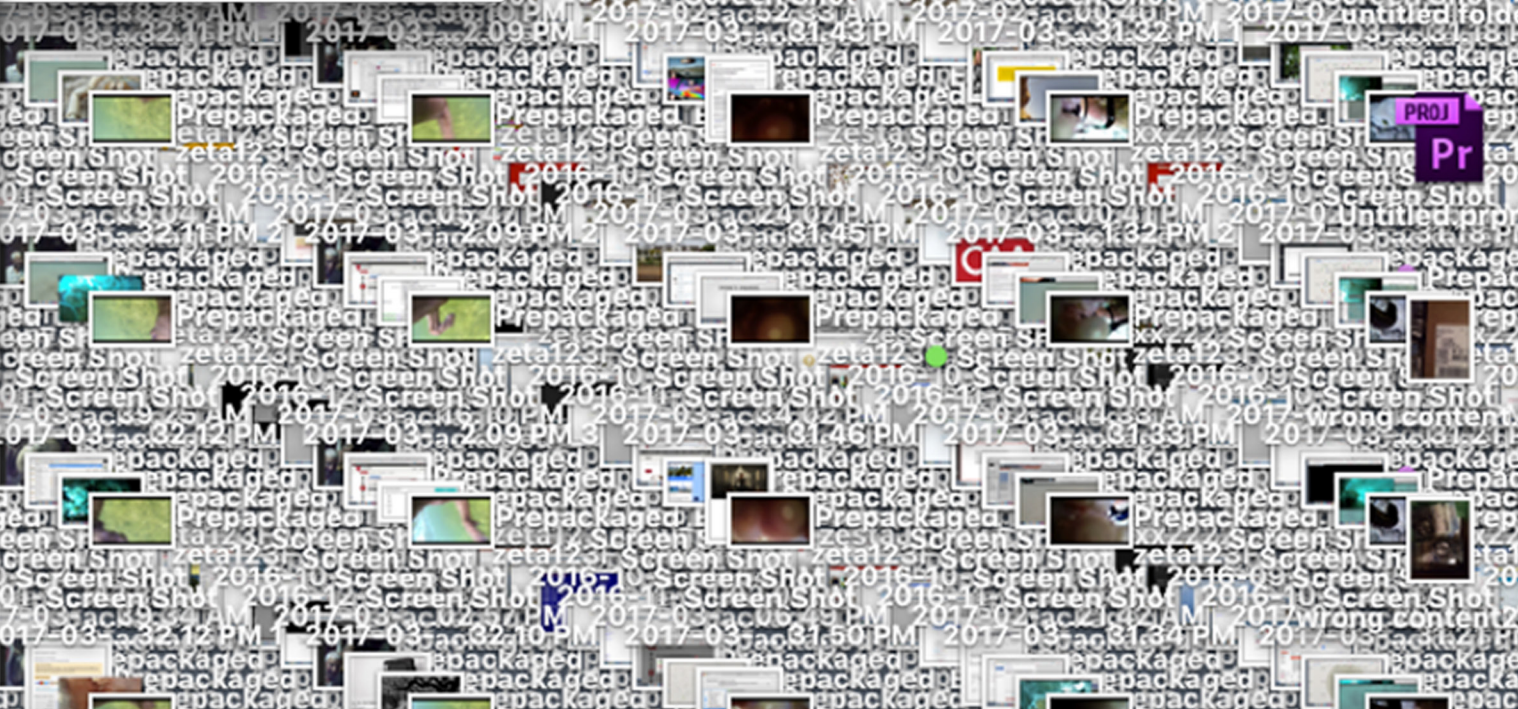
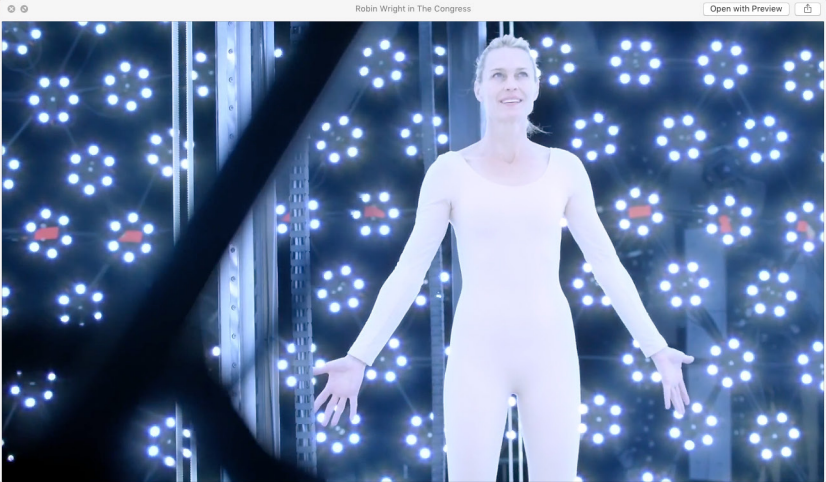
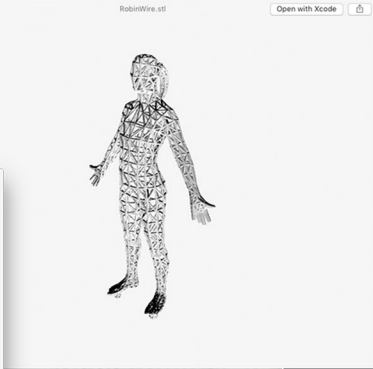
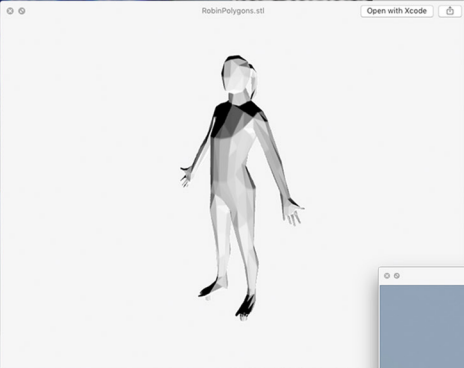
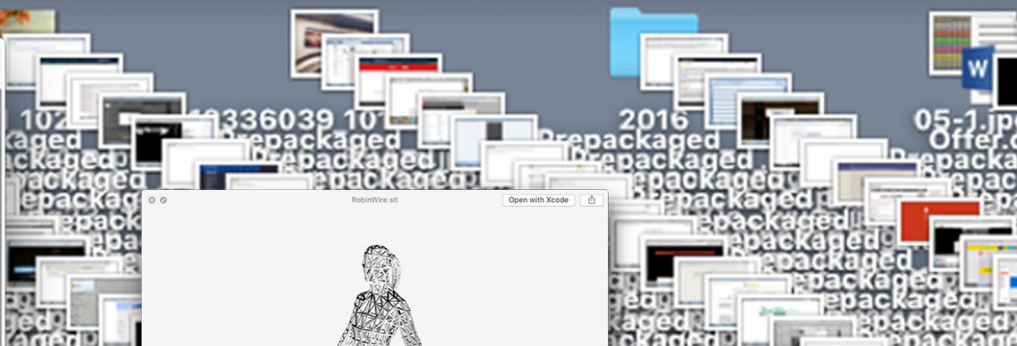
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EMILIO VAVARELLA (1989, Italy) lives and works in the United States. Vavarella is an artist whose work conjugates interdisciplinary theoretical research and experimental media practice. His work tackles the relationship between subjectivity, non-human creativity and technological power, by using and misusing both

emerging technologies and more traditional media. Recently, he has produced fragmented installations composed of images, artifacts, and devices open to complex and non-linear interpretations. Vavarella is currently a researcher at Harvard University. He has exhibited in many of the most important media art festivals as well as in international

institutions, including: MAMbo, Bologna; iMAL Center for Digital Cultures and Technology; Tokyo National Art Center; Laznia Centre for Contemporary Art; Museum of Contemporary Art Vojvodina; Villa Manin, Passariano; Museo Nacional Bellas Artes, Santiago.

Emilio Vavarella



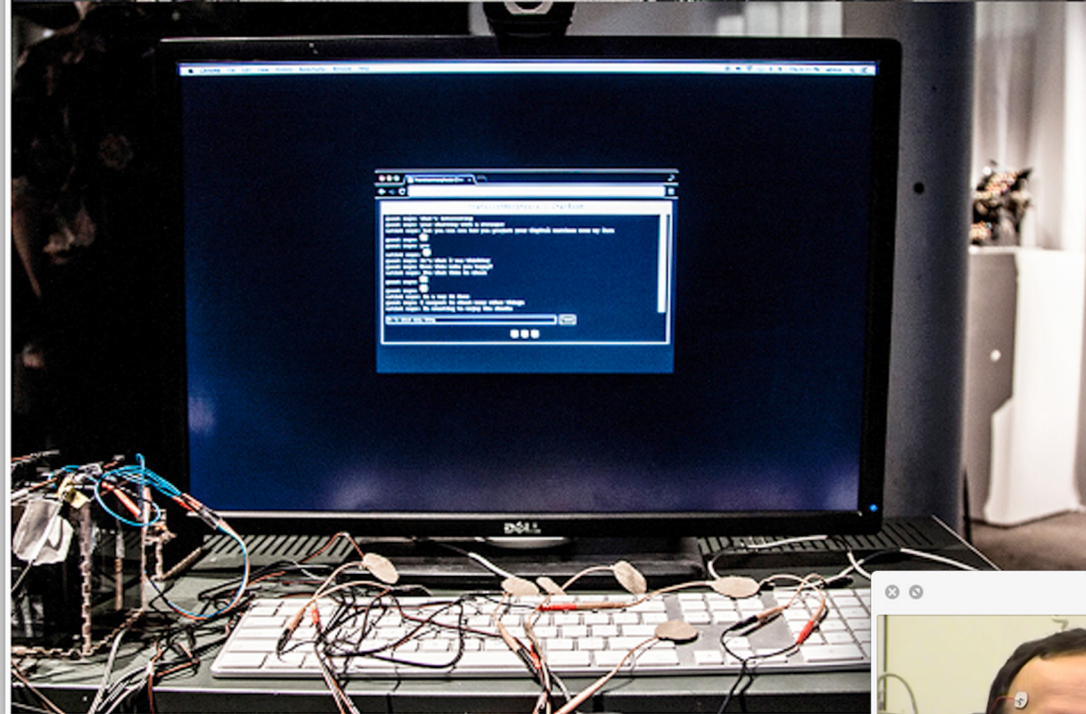
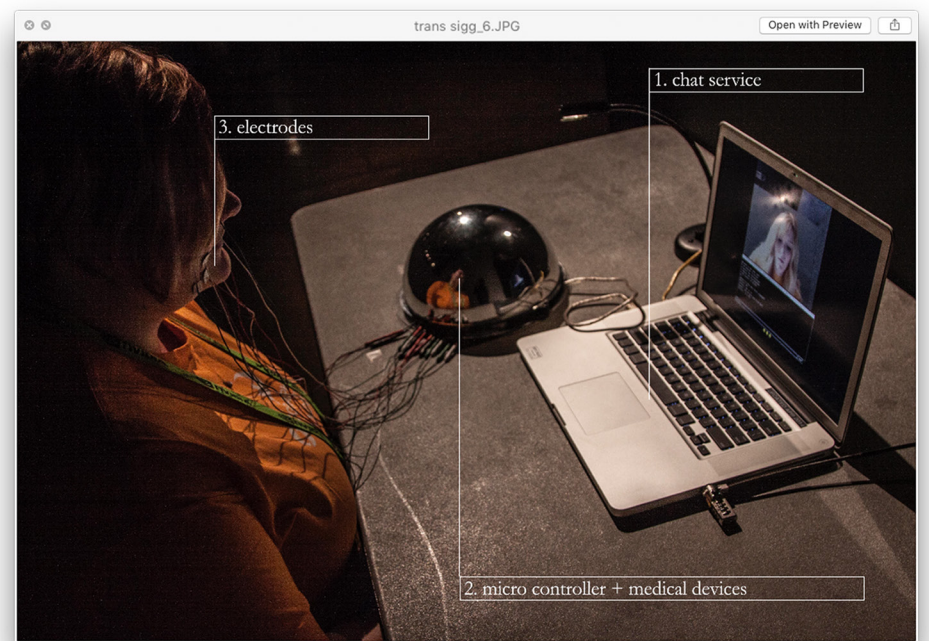
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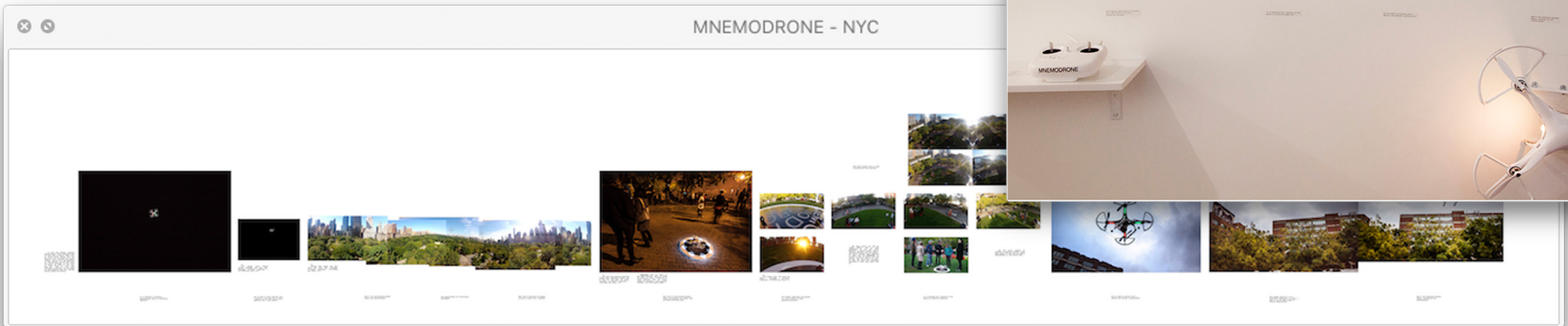
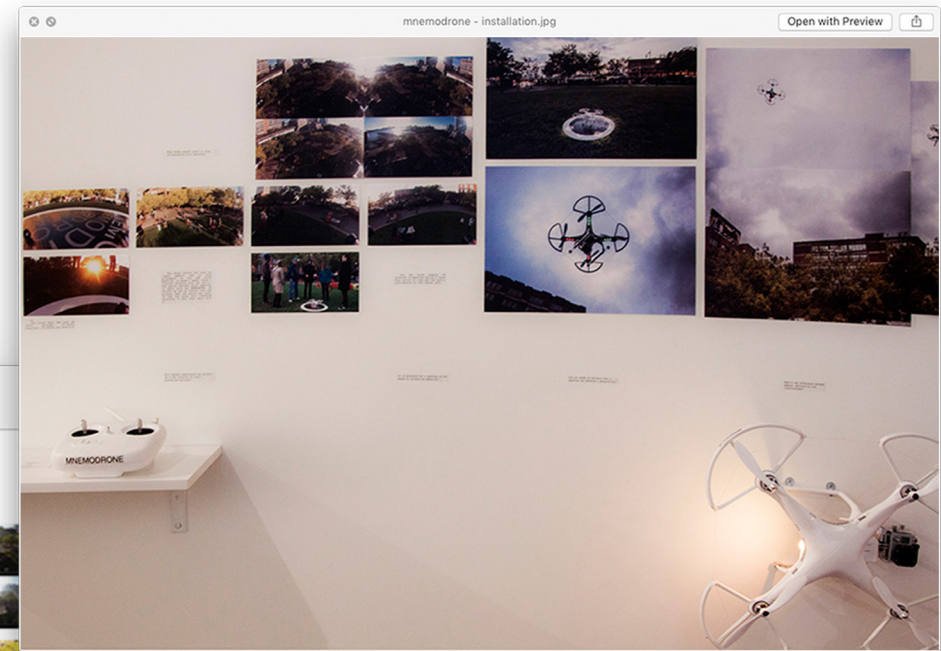
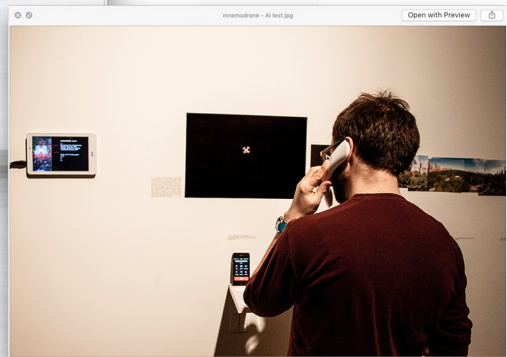
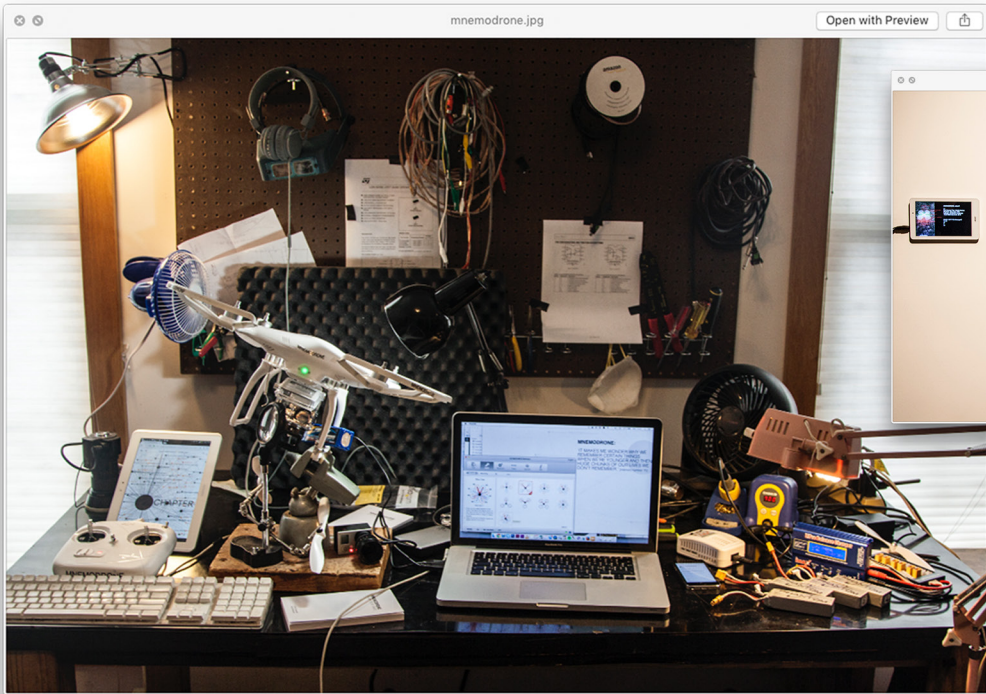
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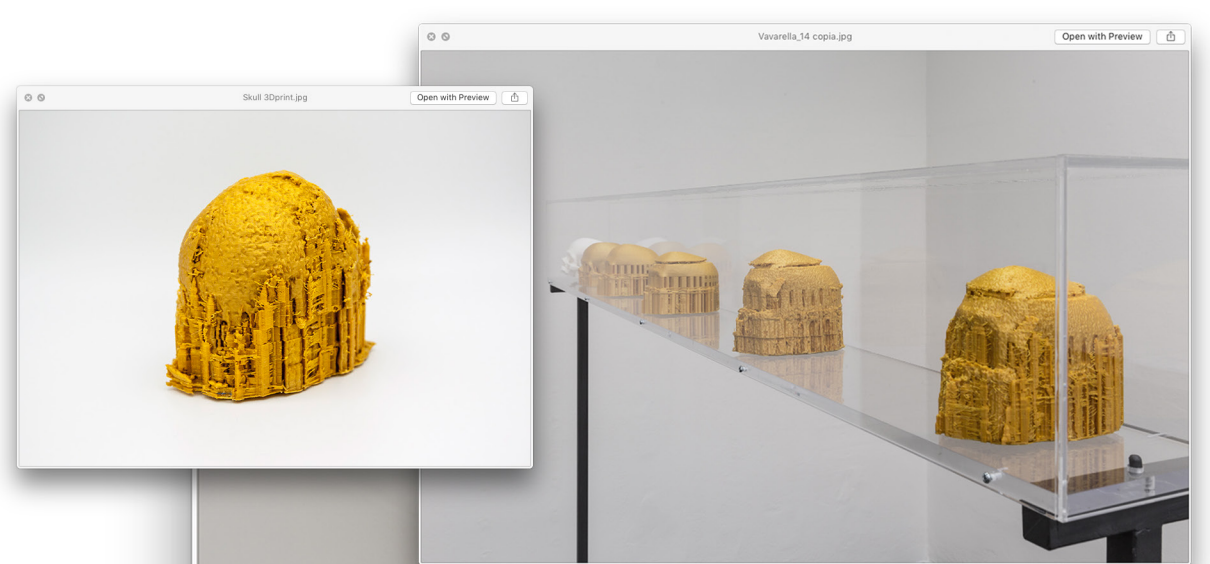
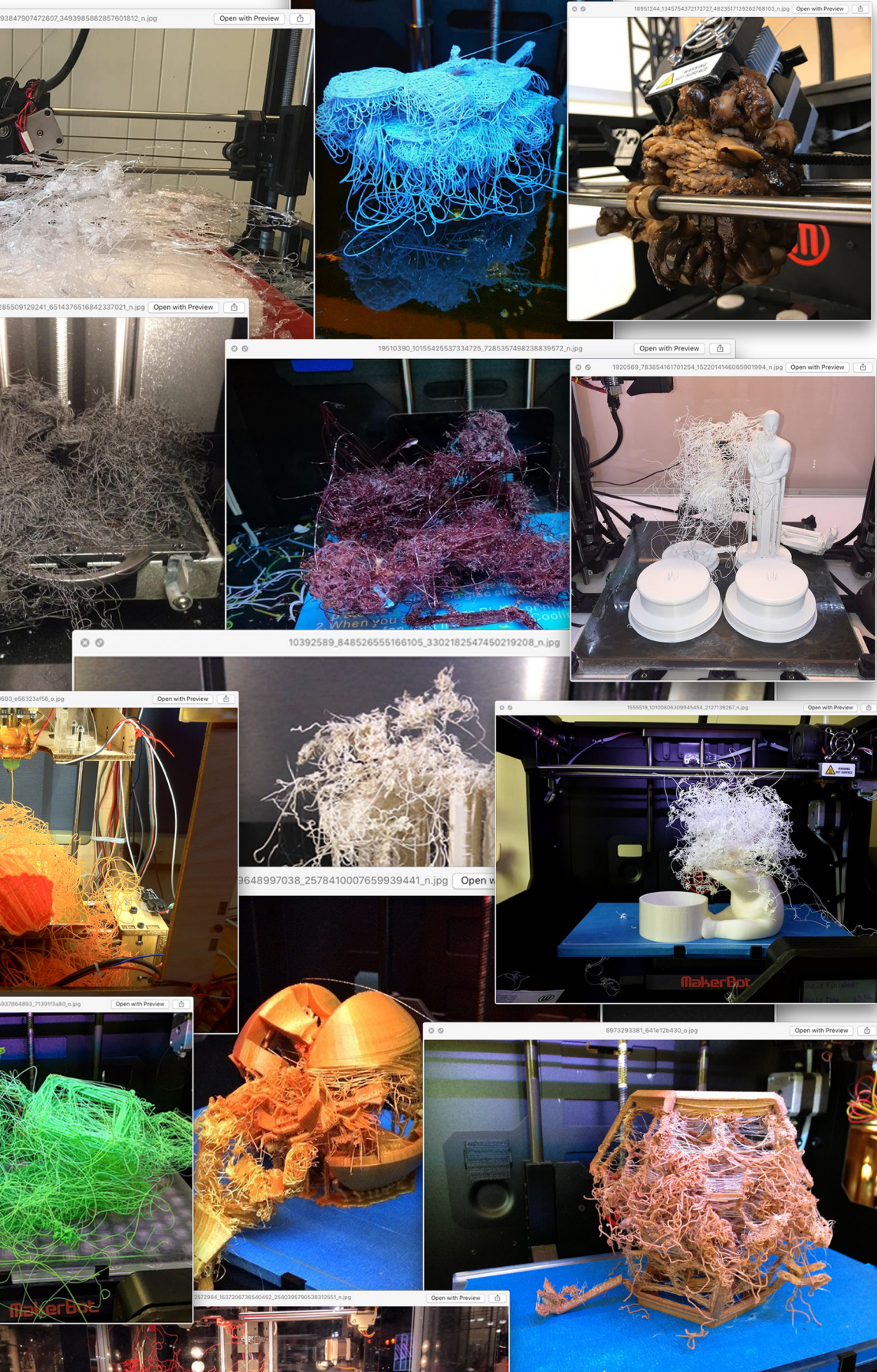
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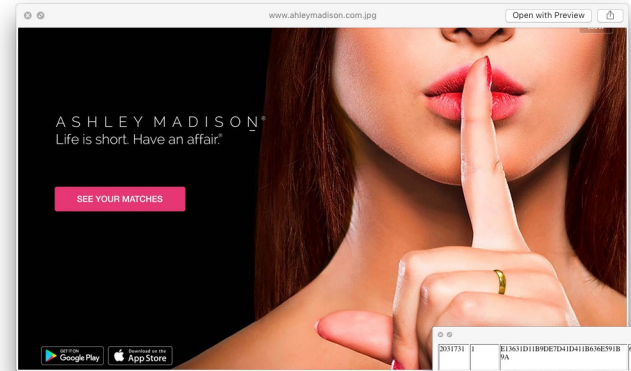
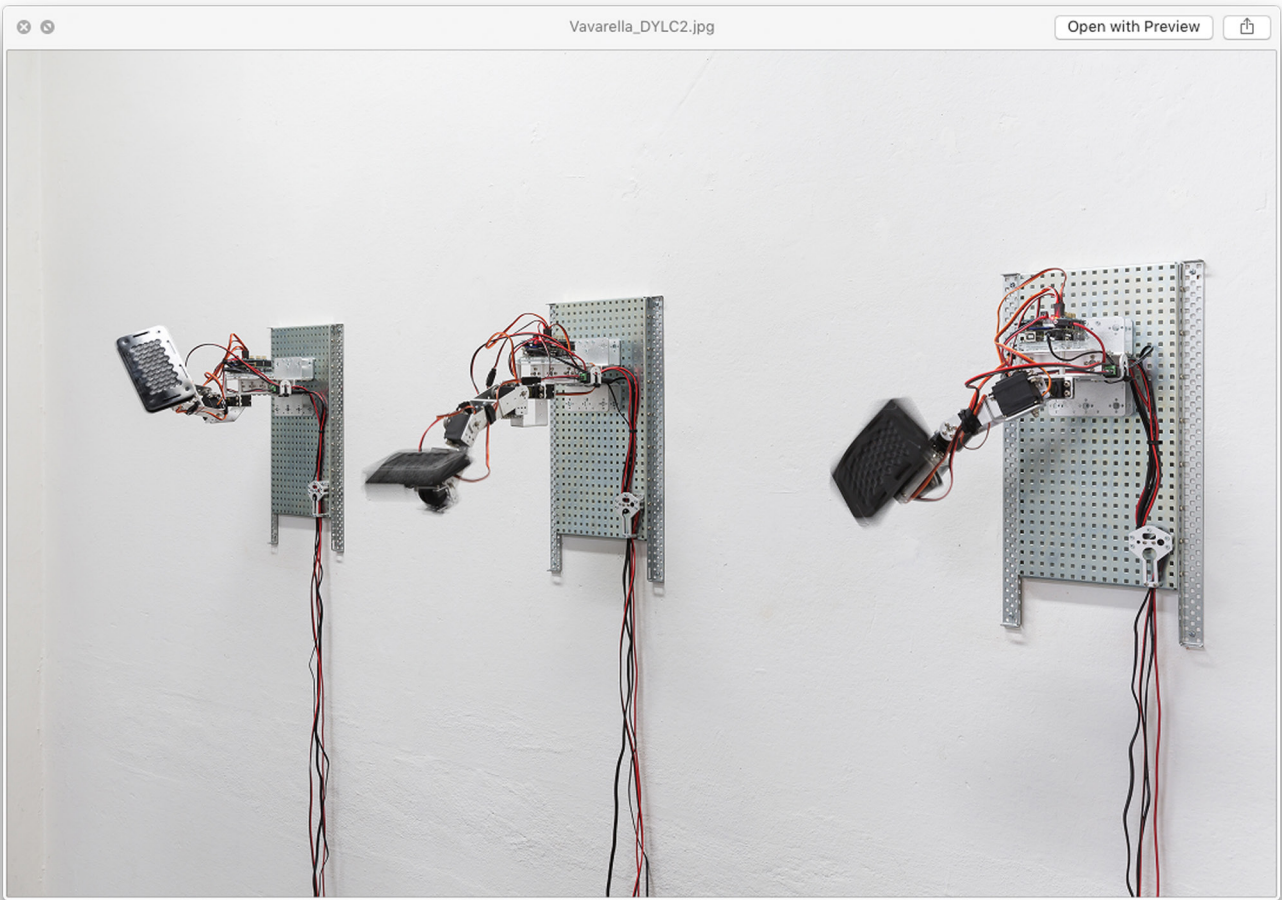
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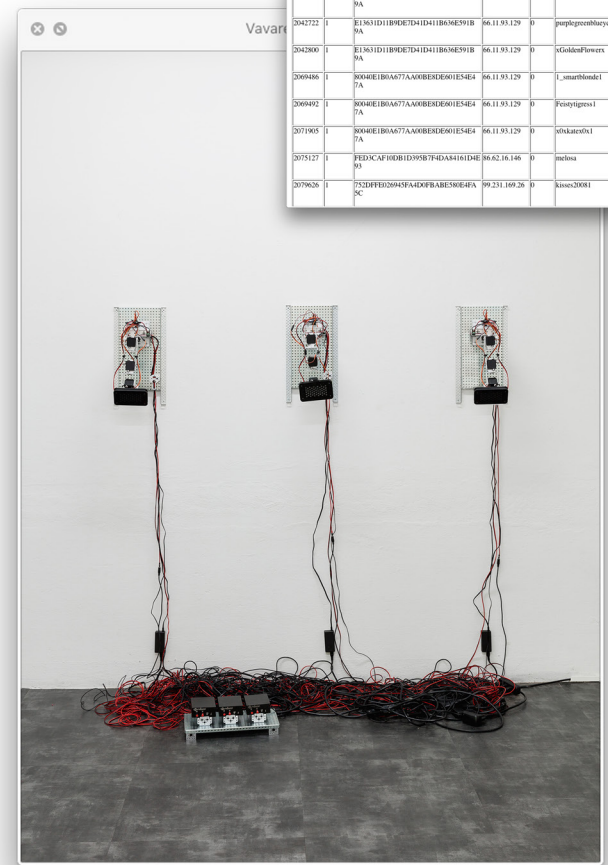








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- 1 Emilio Vavarella
RE: Animation, 2017
Installation composed of the following elements: 1 HD film (8min 30sec, colors, sound, looped); 8 photos (inkjet prints on photographic paper, 40 x 21 cm each); 1 book (softcover binding, 475 pages, colors, US letter format); 1 audio track (00:35 seconds, looped); 1 animated GIF (colors); 1 HD video animation (1min 57 sec, colors, sound, looped); one set of three 3D printed sculptures (ABS plastic, 17 x 30 x 20 cm overall)
Variable dimensions
- 2 Emilio Vavarella and fito_segrera
TRANSICONMORPHOSIS, 2013
Performance with mixed media installation (modified medical device, electrodes, video chat, custom software, electroconductive gel)
Variable dimensions
Courtesy the artists
- 3 Emilio Vavarella and Daniel Belquer
MNEMODRONE, 2014-in progress
Interactive installation divided in six chapters with drone performances, landing platform with solar panels, toll-free number, speech recognition software, several photos and videos, three large-scale data visualizations, two books, one scientific article
Variable dimensions
Courtesy the artists
- 4 Emilio Vavarella
The Other Shape of Things, 2017-in progress
Groups of sculptures in PLA and ABS plastic produced with 3D scanners and 3D printers starting from 'failed' found objects
Variable dimensions
Courtesy GALLLERIPIÙ
- 5 Emilio Vavarella
Do You Like Cyber?, 2017
Site-specific sound installation with three robotic parametric speakers
Variable dimensions
Courtesy GALLLERIPIÙ

Emilio Vavarella

WHAT IS IT LIKE FOR A COMPUTER BOT TO BE A COMPUTER BOT?

The following contribution is partially based upon: E. Vavarella, 2016. "Interview with the drone: experimenting with post-anthropocentric art practice." *Digital Creativity – Special Issue on Post-Anthropocentric Creativity*, edited by Stanislav R. and J. McCormack, Routledge/Taylor & Francis, London 2016, vol. 27, no. 1: 71-81.

It is not difficult to foresee the coming of a world in which artificial intelligence (AI) has advanced to the point that creativity has moved from its current anthropocentric position, with humans at the heart of all creative endeavors, to a 'machinocentric' or 'post-anthropocentric' regime, with machine intelligence as an alternative and independent pole of creative nonhuman production. A regime of autonomous, electronic and post-anthropocentric intensities could free many creative spaces from the currently unrivaled domain of humans. Such occurrence, of course, may never take place. Or it could already be under way, because different kinds of consciousness may coexist without being aware of one another, with human and nonhuman intelligences failing to recognize each other. Most people, for example, seem to agree on recognizing the mental life and even the self-consciousness of different kinds of mammals, and yet as soon as we are asked to consider forms of life like trees or bacteria, our attitude starts to shift towards skepticism. Tentatives to move beyond this framework have been formulated, for example, in Jane Bennett's (2010) 'vibrant matter' of human and nonhuman assemblages. And we are certainly entangled in complex media assemblages of human and nonhuman intelligence. These, in turn, inform complex 'cloud-based' entanglements of networked things and operations, almost mirroring Clark and Chalmers' 'extended mind' thesis, according to which storing information in external memory devices allows off-loading of some of the burden of internal cognitive processes.

And while the rise of autonomous AI may be as swift as unpredictable, artificial intelligence may not resemble human intelligence at all. A self-conscious AI may not look like Kurzweil's *Singularity* (2005). Instead, it may resemble systems like Apple's *Siri*, Microsoft's *Cortana* or

Amazon's *Alexa*. Or it could unfold itself more secretly, unseen and undetected, in the folds of networked environments like dating websites, as I speculate in my art project *Do You Like Cyber?* (2017) based on a series of online Bots that displayed unexpected and insubordinate behaviors. A self-conscious AI could stem from enormous systems that already escape full human oversight, such as the assemblages of satellites, sensors, software and models that compose global weather prediction systems; or it could develop out of an AI neural network used for self-driving cars; or even from an AI system involved with fast trading in the stock market. In 1992, John Searle had isolated a certain set of features that define consciousness, and none of them excluded a priori a sufficiently advanced AI from manifesting consciousness. Searle also wrote that the most important scientific discovery of our era 'will come when someone [...] discovers [how] neurobiological processes in the brain cause consciousness.' But we currently cannot explain why *any* physical state is conscious rather than nonconscious, and we are not even sure that neurobiological processes are the only origin for consciousness. Consciousness still 'marks the limits' of what a science that puts humans at its center can explain (Weisberg 2015), and rather than asking if a certain AI is or could become self-conscious we should redraw the boundaries of what terms like 'intelligence' and 'consciousness' encompass, in order to better account for the processes of autonomous nonhuman agents.

Furthermore, no matter how advanced our analytical models and research frameworks become, the question of self-conscious AI seems destined to remain a mystery to us, precisely as the consciousness of other living creatures is. It may be useful to reference Thomas Nagel's 1974 argument about the 'consciousness of the bat,' according to which no amount of data

will provide us with the knowledge of what it means to be a bat, for the bat, given that we do not share the point of view of a creature able to fly and echolocate. Following Nagel, we could extend such a question to any AI, weak or strong, narrow or complex: 'what is it like to be a computer bot,' we could ask, 'from the perspective of a computer bot?' While AI systems are often considered advanced computer programming and self-conscious AI are still just hypothetical, the reality is that we do not know how to recognize a self-conscious AI, let alone prepare for the legal, ontological, metaphysical, artistic and ethical consequences that we would face if we accidentally recognized one.

Junya Yamamine

ART AS AN EARLY ALARM SYSTEM

Written for the catalogue of the exhibition *Hello World - for the Post-Human Age*, curated by Junya Yamamine at Contemporary Art Gallery, Art Tower Mito, Ibaraki 2018. The original text is written in Japanese. Translated by David d'Heilly

[...]

INTELLIGENCE, MISINFORMATION, AND EMOTION SWARMS

Cécile B. Evans's *Sprung a Leak* is a speculative drama about the relationship between humans and machines, how feelings are valued and how this impacts the experience of being human. A looped three-act play featuring two human-shaped Pepper robots²², one robot AIBO dog²³, and three 'Users' who appear on human scale monitors, all on a quest to discover the whereabouts and well-being of LIBERTY, who apparently needs saving from the system they all find themselves within. The interactions of these characters, and the emotional core of the drama, both by humans, and AI equipped devices, is driven by information leaks streaming in from more than 20 video monitors in the exhibit space. These monitors serve to announce events which drive the narrative forward, constantly revealing new and confounding layers to the narrative. They provide clues to the larger social context

BIBLIOGRAPHY

- Clark, A. and D. J. Chalmers. 1998. "The extended mind." *Analysis*. 58 @: 7-19.
- Bennett, J. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham and London: Duke University Press.
- Nagel, T. 1974. "What is it like to be a Bat?." *Philosophical Review* 83: 435-456.
- Searle, J. R. 1992. "The Problem of Consciousness." University of Southampton. <http://users.ecs.soton.ac.uk/harnad/Papers/Py104/searle.prob.html>.
- Weisberg, J. 2015. "The Hard Problem of Consciousness." *The Internet Encyclopedia of Philosophy* ISSN 2161-0002. <http://www.iep.utm.edu/hard-con/>.

Emilio Vavarella

COSA SIGNIFICA PER UN BOT ESSERE UN BOT?

Il seguente intervento trae parzialmente spunto da E. Vavarella, *Intervista con il drone: sperimentare con la pratica artistica post-antropocentrica*, in *Digital Creativity – Special Issue on Post-Anthropocentric Creativity*, a cura di R. Stanislav e J. McCormack, Routledge/Taylor & Francis, Londra 2016, vol. 27, n. 1, pp. 71-81.

Non è difficile prevedere l'avvento di un mondo in cui l'intelligenza artificiale (I.A.) progredirà tanto da far approdare la creatività – che attualmente si trova in una posizione antropocentrica in cui gli esseri umani sono al cuore di tutti gli sforzi creativi – a un regime “macchinocentrico” o “post-antropocentrico”, in cui l'intelligenza artificiale è un polo alternativo e indipendente della produzione creativa non umana. Un regime di intensità autonome, elettroniche e post-antropocentriche potrebbe liberare molti spazi creativi dal dominio, attualmente privo di rivali, degli esseri umani. Una tale eventualità, ovviamente, potrebbe non verificarsi mai. O potrebbe già essere in atto, perché diversi tipi di coscienza possono coesistere ignorandosi a vicenda, perché le intelligenze umane e non umane possono non essere in grado di riconoscersi.

La maggior parte delle persone, per esempio, sembra concorde nel riconoscere la vita mentale e persino l'autocoscienza dei diversi tipi di mammiferi; eppure, non appena ci viene chiesto di prendere in considerazione forme di vita come alberi o batteri, il nostro atteggiamento si orienta verso lo scetticismo. Sono stati formulati vari tentativi per superare tale inquadramento, per esempio la “materia vibrante” degli assemblamenti umani e non umani di Jane Bennett (2010). E senza dubbio siamo invischiati in complessi assemblaggi mediatici di intelligenza umana e non umana. Essi, a loro volta, influenzano complessi grovigli “cloud-based” di oggetti e operazioni connessi, arrivando quasi a rispecchiare la tesi della “mente estesa” di Clark e Chalmer, secondo cui l'archiviazione di informazioni su dispositivi di memoria esterni permette di scaricare parte del fardello dei processi cognitivi interiori.

E, se l'avvento dell'I.A. autonoma può essere tanto rapido quanto imprevedibile, l'intelligenza artificiale può non assomigliare affatto all'intelligenza umana. Un'I.A. autocosciente può non assomigliare alla *Singularità* di Kurzweil (2005), e apparire invece simile a sistemi come *Siri* di Apple, *Cortana* di Microsoft o *Alexa* di Amazon. Oppure può articolarsi in modo più nascosto, non vista e non rilevata, tra le pieghe degli ambienti connessi quali i siti di appuntamenti, come ipotizzo nel mio progetto artistico *Do You Like Cyber?* (2017), ispirato a una serie di bot online che hanno mostrato comportamenti inaspettati e insubordinati. Un'I.A. autocosciente potrebbe avere origine da sistemi immensi che già sfuggono al controllo umano completo, come l'insieme di satelliti, sensori, software e modelli che compone i sistemi globali di meteorologia; o potrebbe svilupparsi partendo da una rete neurale di I.A. usata per le auto a guida autonoma; o persino da un sistema di I.A. legato al *fast trading* del mercato azionario.

Nel 1992, John Searle isolò una determinata serie di elementi che definiscono la coscienza, e nessuno di essi escludeva a priori che un'I.A. sufficientemente avanzata potesse manifestare una coscienza. Searle scrisse inoltre che la scoperta scientifica più importante della nostra epoca sarebbe arrivata “quando qualcuno [...] avesse scoperto [come] i processi neurobiologici che avvengono nel cervello generano

la coscienza”. Attualmente, tuttavia, non siamo in grado di spiegare perché una qualsiasi condizione fisica sia cosciente oppure no, né sappiamo con certezza se i processi neurobiologici siano l'unico punto di origine della coscienza. Ancora oggi la coscienza “segna i limiti” di ciò che una scienza incentrata sugli esseri umani è in grado di spiegare (Weisberg 2015) e, anziché chiederci se una determinata I.A. sia autocosciente o lo possa diventare, dovremmo ridefinire i confini del significato di termini come “intelligenza” e “coscienza”, per poter spiegare meglio i processi degli agenti autonomi non umani.

Inoltre, a prescindere da quanto possano diventare avanzati i nostri modelli analitici e le nostre strutture di ricerca, il tema delle I.A. autocoscienti sembra destinato a restare un mistero, al pari della coscienza delle altre creature viventi. Può essere utile ripensare al saggio del 1974 di Thomas Nagel sulla “coscienza del pipistrello”, secondo cui nessuna quantità di dati ci farà mai capire cosa significa essere un pipistrello, per il pipistrello stesso, poiché non condividiamo la prospettiva di una creatura capace di volare e di ecolocalizzare. Seguendo il ragionamento di Nagel, potremmo estendere la domanda a qualsiasi I.A., debole o forte, semplice o complessa che sia: “Cosa significa essere un bot dalla prospettiva di un bot?”, potremmo infatti chiedere. Benché i sistemi di I.A. siano spesso considerati il risultato di una programmazione avanzata e benché le I.A. autocoscienti siano ancora una mera ipotesi, la realtà è che non sappiamo come riconoscere un'I.A. autocosciente, e men che meno sappiamo come prepararci per le conseguenze legali, ontologiche, metafisiche, artistiche ed etiche che dovremmo affrontare se, per caso, ne riconosciamo una.

BIBLIOGRAFIA

Clark, A. e Chalmers, D.J., *The Extended Mind*, Analysis 58 (1), 1998, pp. 7-19.

Bennett, J., *Vibrant Matter: A Political Ecology of Things*, Duke University Press, Durham e London 2010.

Nagel, T., *What Is It Like to Be a Bat?*, in “Philosophical Review”, 83, 1974, pp. 435-456.

Searle, J.R., *The Problem of Consciousness*, University of Southampton, 1992. http://users.ecs.soton.ac.uk/harnad/Papers/Py104/searle_prob.html.

Weisberg, J., *The Hard Problem of Consciousness*, in *The Internet Encyclopedia of Philosophy*, ISSN 2161-0002, 2015. <http://www.iep.utm.edu/hard-con/>.

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