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Challenging Black Box Technology Power Imbalances by Exposing Them: “Persuasive System” as a Prism for Decomposing Contemporary Surveillance

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Introduction: Persuasive System

This article contributes to the discussion around surveillance invisibility by engaging with the existing literature and discussing Salvatore Vitale’s “Persuasive System” installation as a case study. Based on the conceptualization of surveillance as a “black box,” the article frames power imbalances involved in biometrics and video surveillance technologies and shows how Vitale’s installation aims at playing with and exposing these dynamics by reconfiguring them. Inserted in the prolific tradition of “surveillance art,” the installation contributes with a focus on the fluidity of the dynamics behind mechanisms interplaying within controllers and data subjects. We will use “Persuasive System” as a prism to look at the multifaceted features of contemporary surveillance technology, looking at deconstruction as a strategy for actually empowering citizens to “see” the surveillance they are subjected to and avoid a future of denialism and passive acceptance of potentially abusive technologies. In this context, the article takes as a starting point an artistic project that aims at designing counterstrategies to the all-encompassing forms of surveillance through “realist” documentary. Based on an experimental approach, this artistic position ultimately allows a broader reflection on strategies for how we, as citizens and political subjects, can counter abstract systems of control with documentary transparency.

“Persuasive System”¹ is an interactive digital installation exploring the power dynamics behind systemic monitoring and surveillance in public spaces by exposing the relational dynamics between the technology and the people being “seen” by it. The installation, which was installed in a public square in Lugano, Switzerland in November 2020 and at the Officine Grandi Riparazioni (OGR) in Turin in November 2021, consists of three customized surveillance cameras constantly filming the space under their gaze. This space was delimited according to the European Data Protection Board guidelines for video surveillance in order to give people the opportunity to choose whether to be in the surveilled area or not. Images captured by the cameras were made visible in real time on a screen at the installation site. At the same time, audience

¹ <https://ps.salvatore-vitale.com/>

participation was taking place in a digital space: on a dedicated website, online users were given the opportunity to interact with the installation and decide what to frame from a distance. This process allowed a double exposure of surveillance: potential “overseen” could become “supervisors” from the internet while the “overseen” in front of the cameras were given the opportunity to “see” how they had been framed by the cameras according to the online “supervisors” decisions. Thus, the “overseen” and the people they “supervise” are put in relation to each other in a subversion of power relationships.

Figure 1: Salvatore Vitale, “Persuasive System,” installation view at OGR – Officine Grandi Riparazioni Torino © Pepe Fotografia. Photograph by Salvatore Vitale.

By staging “a game of visibility and invisibility,” online and offline users are made to interact in the construction of a filmic narrative (Vitale 2020: 93). All data gathered and created by the installation has been stored in order to form a collaborative database, jointly created by the audience and the artist. “Persuasive System” aims at uncovering the hidden mechanisms and power imbalances embodied in contemporary surveillance technologies. The installation also serves as a narrative play showing the design of a system capable of “reinforcing, changing and shaping attitudes, codes and behaviours without coercion or deception” (Vitale 2020: 93). Taking power dynamics fostered by video surveillance systems, the installation brings together further reflections on the fluidity of surveillance dynamics by reflecting on key systemic elements such as data production and distribution, transparency, surveillance realism, and data bodies. The installation also challenges another assumption of contemporary surveillance, exposing information about the “watchers” on the screen, making it visible by anyone approaching the installation. This can be seen as a radical transparency act holding those in the position of “seeing” accountable for their decisions and actions, revealing at least some hints about the power relations and imbalances involved in the surveillance occurring through this otherwise inaccessible “black box.”

Figure 2: Customized surveillance camera; single board computer camera recording and streaming images in real time; part of “Persuasive System.” Photograph by Salvatore Vitale.

Surveillance Technologies as “Black Boxes”

“Persuasive System” is an excellent prism to understand certain statutory elements of contemporary surveillance, especially when it comes to the extremely limited transparency and the power dynamics involved in biometrics technologies. In the wake of the acceleration of technological development and the growing ease of surveillance adoption, being monitored is now a constant reality in a variety of space—both physical and virtual—with boundaries between the two spheres becoming blurred, especially because of the rise of biometrics. This state of things is reinforced by power and information imbalances embedded in surveillance technologies: while we are constantly monitored, we have almost no access to the inner workings of the technologies being used to “see” us, as they operate under a veil of invisibility and with little transparency and accountability. The “black box” metaphor has been frequently used to describe this condition of being constantly watched without knowing enough about how monitoring processes take place. Thus, exposing the inner mechanisms of surveillance technology is a much-needed strategy for transparency and for redressing those power imbalances.

Surveillance technologies have a dual identity. On one hand, they’re capable of seeing and gathering information about the world around them and, increasingly, they also carry features capable of analysing and interpreting what they see. On the other hand, they are built and designed to be discreet, secretive, and elusive. The more they see and sense about us, the less they reveal about their inner workings and how they generate certain outputs. In sum, we know extremely limited details about *what* surveillance technologies are capable of doing and how deep and pervasive their gaze can be, and, at the same time, we have extremely limited access to *how* they see us and what conclusions they are able to draw. For these reasons, surveillance technologies can be considered as the quintessential “black box,” to use Frank Pasquale’s (2016) metaphor. Technological “black boxes” are controversial because, by masking their functioning, they end up covering the potential harm they can cause. As such, this elusive nature is at the core of a form of invisibility that is reinforced by myths and sublime narratives, all used to normalize

surveillance on a broader societal level. This new kind of invisibility that surveillance technologies in particular make possible is a *de facto grey area* that in most cases “escapes legal jurisdiction and democratic oversight” (Olesen 2020: 2).

Surveillance in public spaces, which is increasingly being equipped with machine learning capabilities for facial recognition, is probably the most visible example of this kind of invisibility. According to a report by the Alan Turing Institute (Leslie 2020: 22), discussions around facial recognition are influenced by a “sneaking sense of technological determinism” that brings to a “fatalistic feeling” that makes the adoption of these technologies feel almost ineluctable. Surveillance technologies, and facial recognition and biometrics in particular, are frequently defined by policymakers and private actors and manufacturers as effective, precise, smart, and frictionless solutions for security-building against a variety of potential threats (Eireiner 2020). Despite evidence of potential embedded biases and unfairness, surveillance technologies and machine learning are becoming progressively available (Hao 2019). The rate of adoption of facial recognition and other biometric surveillance technologies has even sped up in recent times and has received a boost by the pandemic (Roussi 2020). The sense of emergency created by the spread of COVID-19 contributed directly to the normalization of various forms of biometric surveillance. Yet, this cultural “pervasive atmosphere” (Fisher 2009) of surveillance inevitability and necessity—that Lina Dencik (2018) has defined, quoting Mark Fisher’s (2009) concept, as “surveillance realism”—could be potentially overturned or challenged by shedding light on the grey areas created by technological determinism and corporate interests, decomposing their inner by-design power imbalances, and making them visible.

Quests for accountability for automated decision-making systems, algorithms, and surveillance technologies are definitely not a novelty, especially in regards to building up effective processes and practices aimed at “meaningful transparency” and “publicness” (Safak and Parker 2020). Ongoing debates are taking place in various fields, including policy, journalism, and academia, centered around how to effectively open the numerous “black boxes” populating today’s technological landscape. Whereas these political and activist demands are fundamental, a cultural/aesthetic contribution is also urgently needed in order to establish a different “atmosphere” around surveillance technologies and an alternative imaginary. Arts can play a major part in this.

Surveillance Art as Reality-Making

It is becoming harder and harder to approach contemporary artistic production without stumbling across a work of surveillance art or artveillance, understood as “the domain of the reciprocal influences and exchanges between art and surveillance” (Brighenti 2009: 137). In the post-9/11 and big digital leaks eras, artists have increasingly researched, decoded, and rethought surveillance systems and dynamics. The great variety of artworks forming the plethora of positions exploring every possible aspect of surveillance favoured the construction of brand-new narratives and ways of seeing and understanding it. Surveillance as a form of capitalistic and authoritarian control is *per se* an abstraction. This process of abstraction is essential to the constitution of post-industrial capitalist dynamics of cultural production—including surveillance technologies and cloud computing. Artistic production, in this context, helps to deploy and analyse ways to decode these forms of abstractions and offers different interpretations, understandings, and visions of the functioning of surveillance apparatuses and other “black boxes.” Therefore, in a context in which reality is mediated by processes of abstractions, artistic production can favour forms of unveiling, decoding, and reinterpreting the roles, usages, and social and political implications of surveillance dynamics both through pure fictional narrations and documentary strategies.

In the context of surveillance art understood as a production process possible through the use of technological apparatuses, technology plays a double role: if, on one hand, some artists have investigated the social, economic, and political implications of the use of certain kinds of technologies adopted for surveillance, on the other hand, others have investigated and used technologies of surveillance as toolkits to create artworks that don’t necessarily present conclusions framed in the field of surveillance studies. Therefore, technology helps create invisibilities through “processes of exclusion” that aim to hide what

cannot be sensed except by “those with a specific knowledge and expertise” (Van Vereen 2018: 219–223). This type of invisibility applied to security studies—and, consequently, surveillance—generated artworks and interventions by artists who, mastering a certain level of expertise, are able to use the same technologies to unveil “black box” mechanisms. It is also important to point out that forms of cooperation and interconnections between art and science favour the flourishing of artworks that are capable of fostering expanded forms of narration and awareness. However, many of these narrations about surveillance—from photography to cinema and media art—have often been imbued with a certain level of dystopia. In other words, artists put into play mechanisms of (self-)defence through forms of activism, documentary, fiction, and speculative realism. By exploring the ethics, politics, and poetics of surveillance, artists have helped animate the debate around a fair and transparent use of surveillance technologies. As Mari Bastashevski (2019: 174), points out, the discussion of surveillance today is no longer about who regulates and controls the data but “what sort of ecosystem and militant logic is necessary to imagine a liberal algorithm, one intelligent enough to negotiate the relationship between itself, a human, and the unstoppable surveilling apparatus of algorithmic power at work today.” In other words, artistic production can help to imagine and shape different futures where a better mediation between humans and technological apparatuses promote better transparency against imbalanced mechanisms of control perpetrated via invisible technological layers and “black boxes.”

Figure 3: Installation view of “Persuasive System,” Lugano, Piazza Manzoni, 2020: three self-produced CCTV customized cameras, LED wall in variable dimensions, data visualizations printed on monomeric vinyl in variable dimensions, 24-hour loop. Photograph by Salvatore Vitale.

Seeing the Future of Surveillance Technologies

Controversial technologies, such as those providing biometric or intrusive surveillance, benefit greatly from obscurity. Inner technical complexity, inaccessibility-by-design, and the legal obfuscation frequently masking the operations of such technical apparatuses are the core components of what constitutes a “black box.” As such, “black boxes” have the capacity to evade scrutiny, audits, and public oversight simply by presenting themselves as complex but efficient. In a “datafied society” where social spaces, practices, and citizenship are increasingly mediated by technologies, such secrecy is problematic, as it obscures fundamental scrutiny and transparency. As David Lyon (2007: 21) argues, surveillance cannot be understood without considering it as a socio-technical system: the technologies are socially shaped as the social is informed by the technical. Literacy is a frequently evoked concept in regards to matters of visibility, accountability, and understandings of these profound dynamics. When it comes to surveillance, something similar to a “critical literacy” (Sander 2020) has not yet been established. Without this kind of critical take and without proper visibility, “black boxes” will be the hegemonic model for technological governance and application, especially in regards to surveillance.

Figure 4: View of the “Persuasive System” digital control room that allows online users to interact with the installation, see <http://ps.salvatore-vitale.com>. Photograph by Salvatore Vitale.

Following this line of thinking, “Persuasive System” helps to analyse and explore the dynamics behind systemic monitoring, providing a closer look into the interactions happening between all the actors taking part in a specific surveillance play. The ultimate goal of the installation is to invite a reflection on the process of normalizing surveillance in the wake of recent social and political events that are promoting the construction of a new reality where surveillance becomes—in all of its forms—central to the functioning of

modern societies. Therefore, by making use of technology to re-enact and hack video surveillance systems, “Persuasive System” invites a mediation process that aims at raising awareness about extractivism, monitoring, and the production and distribution of data. Ultimately, the inner fluidity of contemporary security discourses is unveiled by building a system that renders “black boxes” visible. Mixing fictional and factual narratives, “Persuasive System” offers a space to imagine counterstrategies that can be undertaken to foster better transparency when it comes to systems that regulate society and shape the way we make sense of the world. Adopting these kinds of approaches and abandoning any pretensions of natural representations of reality, these artistic positions engage in a relationship with the real, which is interpreted as a plastic material that is possible to adapt, transform, and rethink in order to create and foster new possible visions and interpretations of reality. The relationship with the real is, thus, transformed into an act of constructing reality. The latter implies forms of reality-making through speculative documentary and the use of non-linear narrative structures. Through the lens of artistic representation and reality-building, new possible futures suddenly become visible. This is a reminder that the current stage of surveillance technologies’ development and adoption is also a “fault” of possibility: while certain deterministic scenarios appear undoubtedly powerful and unchallengeable, “black boxes” can still be opened and dismantled through a process of decomposition, imagination, and struggle.

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