
Expression as interaction: art and surveillance

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Abstract

This paper presents the interactive installation *Smile*, using it to reflect on the socio-political dimension of machine learning-based surveillance technologies, as well as on the more intimate dimension of emotion and expression prediction. The installation consists of an acrylic box containing a screen showing a blank screen that shows footage of the ruins of the Gaza Strip, only when the visitor smiles at it. *Smile* reflects on the role that machine learning can play in automated surveillance, while also exploring our relationship with media spectacle and technology.

1 Introduction

Smile is an interactive installation, part of an on-going series of artworks that explore spatial augmented reality, non-verbal communication, and surveillance. Through artistic research, the pieces explore the relationship between interactive technologies and new media art, focusing on their socio-political impact.

While it is not easy to navigate the tension between art and politics, artistic production is often able to reclaim the sensible as a form of construction of alternative approaches to socio-political reality. In effect, arts-inflected research has proved being very successful in creating design alternatives, with artists not only contributing at keeping things culturally relevant but also offering original approaches that expand the scope of existing analyses [1].

This simultaneous exploration of (interaction) design alternatives and artistic possibilities, allows for the investigation of the underlying technological landscape together with their social impact. In effect, the appropriation of scientific and technological knowledge inherent to new media art allows practitioners to escape the re-creation of existing applications of contemporary technologies, taking advantage of the complexity and expressiveness of technology as a new medium [2].

2 Facial surveillance in art

There is a rich tradition of, in Golan Levin's words, "art that looks back at you". Face tracking and expression prediction, have also been explored in artistic installations. A well-known previous use of smile detection is Christian Möller's *Cheese*. This work consists of the reproduction of videos of actresses smiling, with the addition of a display that shows the intensity of each smile. The videos are recordings of "six actresses, each try[ing] to hold a smile for as long as they could, up to one and half hours. Each ongoing smile is scrutinized by a[n] emotion recognition system and whenever the display of happiness fell below a certain threshold, an alarm alerted them to show more sincerity." [3]

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Other artworks that reflect on facial tracking and recognition include the author's *Memoirs of the Blind* [4], Adam Harvey's *CVDazzle*, [5], Ivor Diosi's *QUALIA* [6], and Golan Levin's *Opto-Isolator* [7], among many others.

These artistic explorations are particularly relevant for they entail the colonisation of material evidence that otherwise responds to existent power dynamics that are antithetic to the research on the construction of meaning inherent to the artistic practice.

3 Some Context

The Gaza strip is a self-governing Palestinian territory on the eastern coast of the Mediterranean Sea that borders Egypt on the southwest and Israel on the east and north. Gaza and the West Bank are claimed by the State of Palestine.

The 2014 50-day war between Israel and Hamas claimed the lives of more than 2,150 Palestinians, wounded more than 10,000 and displaced an estimated 300,000 people, with Israel dropping about 20,000 tons of explosives on Gaza [9]. On the Israeli side, at least 64 soldiers were killed, and six civilians died. Since then, only one third of the 11000 homes destroyed have been rebuilt.

In this context, western media has systematically adopted a narrative embedded in a “pro-Israeli interpretative framework” [10], aiming at “normaliz[ing] Israeli perspectives and re-inscribe Palestinians as both political and social ‘other’” [9]. Moreover, western's cultural relationship with war often frames it within a fascinated perspective. The ascription of victims to this ‘otherness’ allows for war to be reframed as entertainment. This Debordian spectacle constructed from otherwise dramatic news constitutes a contemporary iteration of well-known processes of neo colonialism.

4 The Artwork

Smile, is a mixed-media installation consisting of a screen situated in a black box, mounted on the wall. The screen is black. When an interactor smiles at the installation, drone-footage of the ruins of Gaza, digitally slowed-down by the artist, fades-in. If the interactor stops smiling, the videos stops. It only plays when the interactor widely smiles at it.

The installation reflects on the aforementioned construction of a spectacle from otherwise dramatic news, as well as reflecting on the otherness and dehumanisation of war.

The piece also explores on the power asymmetries that technology crystallises where spectators are forced to surrender to the imposed narratives. The piece aims to provide with a reflection on the aesthetics of our relationship with it, while simultaneously showcasing the advancements in computer vision and human-computer interaction.

5 Power, Interaction, and Machine Learning

While all interaction codifies, or enacts, power negotiations and choreographies, surveillance infrastructure renders the power disbalance between surveiller and surveilled explicit. This explicitness, however, remains inconspicuous for we have normalised a state of constant surveillance. Sometimes even to be surveilled is to exist, in the sense that many social processes require the surveillance to acknowledge their participants.

And yet this normalisation is subverted by the ontological shift resulting of the invasion of machine learning predictors that can probe into areas safeguarded until now. A machine learning predictor of emotion invades an intimate realm, a mental state that is perceptible in a facial expression.

If as Möller said, “the performance of sincerity is hard work” [3], a forced performance is invasive. In *Smile* this invasion is doubled, exaggerated by the shocking contradiction of the interactor's smile and the footage that enabled by the smile. The facial performance allows, grants access, to an object of desire that is obscure and uncomfortable.

6 Ethical Implications

The piece presents a fertile starting point for a discussion on the ethics of machine learning and art. First and foremost, the piece surveils its visitors. In attention to their privacy, *Smile* does not record any of its visitors. A second question resides on the discomfort that the piece generates on some viewers. Is it OK to propose an activity that many find morally reprehensible? A third question consists on the piece doubling down on war and misery as spectacle. To include these subjects without falling into exploitation is not easy. While I hope having achieved it, I remain attentive to alternative readings.

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