

## The Techno-Politics of Programming Vision: Heba Y. Amin and Anthony Downey

*Broadening debates about the future of image technologies, this conversation discusses the histories of image-making technologies and how they define post-digital and neo-colonial models of representation. Amin and Downey explore the interdisciplinary relationship that exists between art practices and models of academic and critical research, neo-colonial violence, machinic vision, photography and colonial exploitation, and data extraction. The conversation was recorded on May 30, 2022, at Zilberman Gallery (Berlin) and coincided with the opening of Heba Y. Amin's show *When I See the Future, I Close my Eyes* (Chapter II), which was curated by Anthony Downey. We have edited it here for clarity and a number of footnotes have been added for further exposition. The full version of the transcript can be found here: <http://thirdtext.org/downey-amin>. The event was part one of two roundtables held on the occasion of the show. The second part, held in-person in Berlin in July, 2022, included Amin, Downey, Maya Indira Ganesh, and Ana Teixeira Pinto in conversation and will be published in an upcoming issue of Visual Studies.*

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**Anthony Downey:** I want to begin by reflecting upon the nature of interdisciplinary practice—how, specifically, Heba and I bring together our research to develop methodologies for thinking about image production. We both think from *within* the apparatus of image production rather than merely reflect upon it, that is to observe. For Heba's practice-based research this usually involves producing work that is actively engaged in thinking *through* colonial processes of image production and their legacies; for me, likewise, it tends to involve developing strategies for understanding the violence of colonial representation (the extraction of data from images, for example) and the increasingly prevalent role of digital images in this process.<sup>1</sup> The element that seems constant is how our interdisciplinary research and its relationship to practice can produce methodologies for deconstructing digital images from within the infrastructures of their production. So, let's start with one of your recent projects, *Windows on the West*, 2019. The project is basically a tapestry that touches upon a number of areas — data extraction, the violence of colonial representation, image production — that remain crucial in our ongoing discussion but could you talk us through the image you have referenced, specifically what it is, and then what it represents in the context of this project?

**Heba Y. Amin:** This is an image I've been working with for quite a few years now. It portrays the first documented photograph taken on the African continent, three months after the Daguerreotype was gifted to the world by the French in 1839. The image was taken at a moment when French artists, and particularly Orientalist painters, were rushing to all corners of the world to capture the first photographs. The image itself is not necessarily the most striking aspect per se, but more compelling to me is what it represents and how that is still relevant to us today. The photograph depicts Mohamed Ali Pasha's palace in Alexandria, with focus on the architectural wing of the harem. It was taken by Orientalist painter Horace Vernet and his nephew Frédéric Goupil-Fesquet while on an expedition in Egypt. When it

was exhibited in Paris for the first time, it supposedly created excitement due to the sexual implications elicited in the European imagination. I find the story of this image intriguing because it speaks to broader issues that I would like to touch upon. I was fascinated by what it means to have this predatory gaze inscribed in the image and what tools one could use to extract that male gaze. Up to this point I had been working with the photograph in various ways, and settled on its reconstruction as a woven tapestry. It is important to note here that the image I've used for reference is an engraving of the original photograph, as it was common for 19<sup>th</sup> century painters to utilize photographic documentation for art production, namely painting. The original glass plate, however, no longer exists but the engraving remains. For this work, I utilized a jacquard weaving loom, which is essentially one of the first machines to perform automated tasks through a punch card system. It is considered an important technological development towards modern computing — of course, today we can use computers to help reconstruct the image but, in this case, the tapestry is still created through an analogue or hand-made process, which was important for me as I wanted to intervene personally in the process of production. This approach to image production is obviously different from taking a photograph or a snapshot which captures the entirety of the image at once through a lens. The image, broken down line by line, is only visible once the final tapestry is completed. While the embedded predatory gaze may not ever be eliminated, at the very least I can attempt to shift the perspective.

**AD:** Could you talk us through this further, specifically the tapestry element that was woven on a Jacquard loom, a device invented by Joseph-Marie Jacquard, a French weaver and merchant, who revolutionised how patterned cloth could be woven. The Jacquard machine used punch-cards, which inspired the development of early computers, to produce detailed patterns. One of the first anti-industrial protests came out of that production process, when low-skilled weavers took their sabots, a wooden shoe or clog, and threw them into the looms (thus gifting us the word “saboteurs”). For this project, we have a connection between the original weaving and a digital component. Could you talk us through the digital component of this image?

**HYA:** As the first machine to follow algorithmic instruction, I would be curious to try the original punch-card system. However, the Textile Prototyping Lab in Berlin, who helped me produce this textile, have a mechanized loom which uses software that distils the image into various degrees of grey. The software determines which threads move up and down with black and white but also determines the weave structure to obtain gradation. The actual weaving is done manually.

During our test trials, I was intrigued by the way the test strips helped visualize the mechanisms at play by revealing process of production through the different weaving patterns and gradation variations. These remained as the “ends” of the tapestry, the stripes at either side. It helped me think through the idea of digitization with what is often considered a traditional art form.

**AD:** Your version of the original image, here woven from a photograph, is also a reflection on the history of photography as a mechanism for “fixing” or producing realities. By which I mean, in the colonial context, out of which the original photograph originated, the act of photographing an object or terrain operated as a means to fix that present moment of colonial power and domination. Could you talk a little bit more about that?

**HYA:** This is essentially what drew me to the image: the idea that these first photographs were taken in Africa in particular, and that the manner in which the French had sexualized North African women was merely an extension of territorial domination. When they first arrived with their cameras, however, they didn't find their imagined fantasy, it was completely contrived. In part, it is what is alluded to in the photograph that became the focus. This was also part of the orientalist tradition, of course: the staging of a reality or its contrivance. Some orientalists would pay or force women who had no agency to pose nude, in the ways that they had imagined. It is interesting how the French are still obsessed with undressing Arab women.

**AD:** The one thing that has changed is the technologies of representation. The original photographs were circulated as material objects, and the display and circulation of the image would have had a physical context. As we move forward into our post digital age, such images today are less material and more networked as digital images. The pixelated image also becomes data for use in machine learning systems and for training algorithms, so it has lost some of its symbolic context and has become more of an instrumentalised image. The pixelated image, in a neo-colonial context, is both a way of mapping realities and a means from extracting and extruding data.<sup>2</sup> We have both the violence of mapping and extraction concentrated in the pixelated image, in sum.

**HYA:** I think it would be interesting to also talk about the duplication and the dissemination of these kinds of images before the digital age, because a lot of these images were actually produced as postcards in order to disseminate them cheaply and quickly. It is also about thinking through how images were used as a form of propaganda and a form of power, how one dominates territory through image production. I don't think this is dissimilar to how digital images are disseminated and data extraction is used to propagate propaganda for territorial domination today. I think it is a continuation of the same system.

**AD:** I was also thinking about this apparatus of image production in connection to a more recent work, *Atom Elegy*, 2022, and how it relates *Windows on the West*, 2019. One thing occurred to me: since the 1950s, there have been numerous treaties to legislate for (and against) the use of nuclear weapons. Today most nuclear “detonations” are virtual. They exist as computer-based and algorithmic modellings of what happens to fissile material after the event of detonation. To this end, virtual modelling has effectively taken over from the actual explosion or the nuclear detonation itself. I think this is a great metaphor for thinking through the inscription of violence into the digital. How does the digital inscribe violence, how does it contain violence, how does it let violence erupt? Which brings us right back to the inscription of violence into the image we see in *Windows on the West*. Violence is there from the outset;

the violence of the gaze inscribed in the realisation of an image of otherness. There is also the violence of extraction—what was being extracted, fixed, repurposed, and perpetuated in that photographic moment.

This returns us, by way of a provisional end, to matters that you and I have discussed at length, specifically, how colonial violence has been re-inscribed through digital technologies in order to occupy future realities. The question, as we have been discussing in relation to your practice and my research, is how do you disrupt that transmission of information? What methodologies do you use and what forms of digital methodology can you use to think from *within* these apparatuses of image production, be they based on photographs, the weaving of an image, or a digital process?<sup>3</sup>

**HYA:** Indeed, not only what methodologies can one use to think from within the apparatus of image production, but also how does one critically confront that inscription of violence through formal and informal visual investigation and practice?

**Heba Y. Amin** is a Professor of Digital and Time-Based art at ABK-Stuttgart, the co-founder of the Black Athena Collective, curator of visual art for the MIZNA journal, and currently sits on the editorial board of the Journal of Digital War. She was awarded the 2020 Sussmann Artist Award for artists committed to the ideals of democracy and antifascism, and was selected as a Field of Vision Fellow, NYC (2019). Amin's work has been shown in numerous exhibitions including The Mosaic Rooms, London (2021), the Böttcherstrasse Prize Exhibition, Bremen (2018), Eye Film Museum, Amsterdam (2020), Quai Branly Museum, Paris (2020), MAXXI Museum, Rome (2018), Liverpool Biennial (2021), 10th Berlin Biennale (2018), 15th Istanbul Biennale (2017), and 12th Dak'Art Biennale (2016), to name a few. Her latest publication, *Heba Y. Amin: The General's Stork* (ed. Anthony Downey) was recently published by Sternberg Press (2020) and her works and interventions have been covered by *The New York Times*, *The Guardian*, the *Intercept*, and *BBC* among others. Furthermore, Amin is also one of the artists behind the subversive graffiti action on the set of the television series *Homeland* which received worldwide media attention.

**Anthony Downey** is a Professor of Visual Culture in the Middle East and North Africa (Birmingham City University). He sits on the editorial boards of *Third Text*, *Digital War* and *Memory, Mind & Media*, respectively, and is the series editor for Research/Practice (Sternberg Press, 2020–ongoing). Recent and upcoming publications include *Post-Digital Futures and Algorithmic Anxieties* (MIT Press, 2024); *Nida Sinnokrot: Palestine Is Not a Garden* (Sternberg Press & MIT Press, 2023); *Khalil Rabah: Falling Forward – Works, 1995–2025* (Sharjah Art Foundation and Hatje Cantz, 2022); *Topologies of Air: Shona Illingworth* (Sternberg Press & The Power Plant, 2022), and *Heba Y. Amin: The General's Stork* (Sternberg Press/MIT, 2020). He is the Cultural and Commissioning Lead on a four-year multi-disciplinary AHRC Network Plus award, where his research focuses on supporting cultural practices, digital methodologies and educational provision for children with disabilities in Lebanon, the Occupied Palestinian Territories and Jordan (2020–2024).

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<sup>1</sup> For a further discussion of these methodological issues in relation to colonisation and drone warfare, see Heba Y. Amin and Anthony Downey, “Contesting Post-Digital Futures: Drone Warfare and The Geo-Politics of Aerial Surveillance in the Middle East”, *Digital War* 1 (2020), pp. 65–73.

<sup>2</sup> Anthony Downey, “The Algorithmic Apparatus of Neocolonialism: Or, Can we hold Operational Images to Account” *Nordic Journal of Aesthetics*, vol.30, No. 61-62 (pp.78-82).

<sup>3</sup> These and other issues are part of Heba Y. Amin and Anthony Downey’s upcoming publication, *When I see the Future: Digital Methodologies, Techno-Politics, and Practice-Based Research* (forthcoming, Sternberg Press, 2024).

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