

Seeing is not believing: Visual literacy in the age of AI

Kasia Wolfson Anthropology Department
AI Community of Practice Fellow Fall 2021

Module 2: Image as Evidence

Image as evidence



Photography: new form of visual expression

- According to Walter Benjamin “photography makes the difference between technology and magic visible”
- Seen as writing with light since its invention in the early 1800s
- Thought to reflect reality & detail in an objective way
- Automatic process implied by the mechanical use of a camera
- Quickly recognized as a vital tool in the transmission of *reliable* data
- Thought to be without human intervention/subjectivity
- Communicating a sense of authenticity/truth in what is represented

Photograph as evidence

- Indexical – seen as accurate source of information
- The loss of physical connection should make one question the authenticity of the image
- According to J. Berger (1980, p. 291), in technical terms, the negative is the original, but “the very principle of photography is that the resulting image is not unique, but on the contrary, infinitely reproducible”
- Alterations to photos (staging, post-production, captions) have always been made. But with analog photos, there is the original – the negative/positive
- Photo as a propaganda tool, an instrument of repressive social/political control

Image as evidence in the analog age

- Analog: requiring a physical intermediary – a negative/positive to deliver the image
- Resulting image not unique, infinitely reproducible
- Alterations to images have always been made
- Images as abstractions:
 - selections from available evidence (parts of a whole)
 - framed by an individual
 - situated in a particular context

For more on images in next slide see: <http://www.alteredimagesbdc.org/>

Exercise template on examining images:

https://www.archives.gov/files/education/lessons/worksheets/photo_analysis_worksheet.pdf

Image manipulation in the age of analog

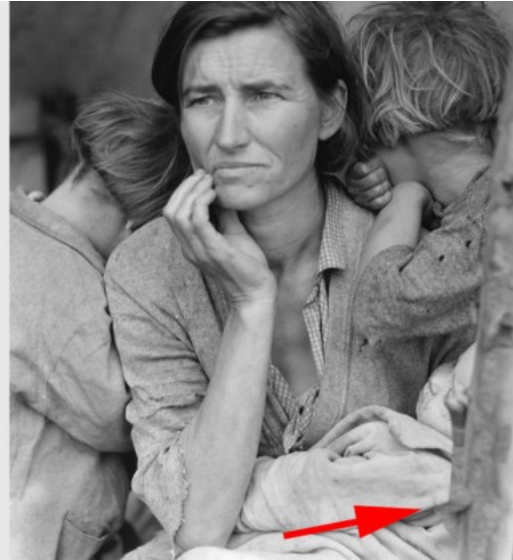


Image as evidence in the digital age

- Digital: light directly converted into an image, "writing with light", without the material phase
- "Images produced without intermediaries" like negatives, chemicals, paper (Sassoon, 2004, p.186)
- Benefits of digital imaging: access, preservation
- Drawbacks: immaterial, manipulating images accessible to all ("to photoshop" becomes widely used as a verb)
- Image and its special status as a physical artifact/evidence re-evaluated and questioned

For more on images in next slide see: <http://www.alteredimagesbdc.org/>

Image manipulation in the age of digital



הטרור האסלאמי בראש סדר היום העולמי:

נשיא ארה"ב יוזם מפגש פסגה בינלאומי בווינגטון שיעסוק בהתמודדות מול הטרור

א'סיסי קורא לפרומה באסלאם ■ גורמי מודיעין: הפגיעים בפרוץ היו רק יריית הפתיחה ■ קמרון: 'הג'יהאד' עוד ילווה אותנו שנים רבות' ■ מתקפות ואיומים על מערכות עיתונים נוספים

הנא יעקב א. לוסטיגן

התגובה של אסאמה לטרור הבין-לאומי היא תגובה חריגה. נשיא ארה"ב יוזם מפגש פסגה בינלאומי בווינגטון שיעסוק בהתמודדות מול הטרור. א'סיסי קורא לפרומה באסלאם. גורמי מודיעין: הפגיעים בפרוץ היו רק יריית הפתיחה. קמרון: 'הג'יהאד' עוד ילווה אותנו שנים רבות. מתקפות ואיומים על מערכות עיתונים נוספים.



הנשיא אמר כי הפגישה תהיה בין נשיא ארה"ב ובין נשיאי ארבעים מדינות. המפגש יתקיים ב-15 במרץ בוושינגטון. הנשיא אמר כי הפגישה תהיה בין נשיא ארה"ב ובין נשיאי ארבעים מדינות. המפגש יתקיים ב-15 במרץ בוושינגטון.



Digital transformation

- The experience of photo-taking, manipulating, storing, viewing, preserving, and sharing transformed
- According to Sassoon, “digitizing involves a more complex cultural process of translation – or a change between forms of representation” (2004, p.188) – physical to immaterial
- In terms of image content: the transformation “appears to be neutral, transparent and unmediated” (p.188)
- Is it?
- The process is nuanced: “cultural, not just technological” (p.189)

A process of translation

- Reductive: “once 3D physical objects become 1D surrogates/ghosts” (Sassoon, 2004, p.190)
- “Tactility and materiality reduced” (p.190) to a short lived or delicate state of a computer file, possibly creating a digital dark age
- Without important/diverse “visual cues embedded” (p.190) in physical photos
- “Fidelity & authenticity of digital images” called into question (p.190)
- Possibility of image content and condition being enhanced, manipulated
- “Encourages focus purely on content” (p.190), away from form. What if form is important?

Image as evidence in the age of AI

- Technological advancements making it harder to distinguish between what is real and what is fake
- Designed to deceive, marketed as authentic
- Deepfakes (see slide 12)
- Image colourization (see slide 13)
- Deep Nostalgia (see slide 14)
- The photographer and the photographed did/could not consent
- Potential to falsify history, can be exploited by revisionists and deniers
- Requires a reengagement with visual literacy

Image manipulation in the age of AI



<https://thispersondoesnotexist.com/>

Image manipulation in the age of AI



<https://www.irishcentral.com/culture/matt-loughrey-cambodia-vice>

Image manipulation in the age of AI



<https://youtu.be/rxp5Rl1G70c>



<https://youtu.be/FfbamiR764E>

Resources:

- <https://www.historic-uk.com/CultureUK/The-Fairies-of-Cottingley/>
- Sassoon, J. (2004). Photographic materiality in the age of digital reproduction. In E. Edwards & J. Hart (Eds.), *Photographs object histories: On the materiality of images* (pp. 186-202). Routledge.
- Berger, J. (1980). Understanding a photograph. In A. Trachtenberg (ed.), *Classic Essays on Photography* (pp. 291-294). New Haven, CT: Leete's Island Books.
- <http://www.alteredimagesbdc.org/>
- https://www.archives.gov/files/education/lessons/worksheets/photo_analysis_worksheet.pdf
- <https://theworld.org/stories/2018-01-01/scientists-warn-we-may-be-creating-digital-dark-age>
- <https://theconversation.com/the-slippery-slope-of-using-ai-and-deepfakes-to-bring-history-to-life-166464>
- <https://mitsloan.mit.edu/ideas-made-to-matter/deepfakes-explained>
- <https://thispersondoesnotexist.com/>

Resources:

- <https://www.nytimes.com/interactive/2020/11/21/science/artificial-intelligence-fake-people-faces.html>
- <https://theconversation.com/the-controversial-history-of-colourizing-black-and-white-photos-160310>
- <https://www.irishcentral.com/culture/matt-loughrey-cambodia-vice>
- <https://facesofauschwitz.com/>
- <https://www.smithsonianmag.com/smart-news/ai-program-deep-nostalgia-revives-old-portraits-180977173/>
- <https://britishassociationforholocauststudies.wordpress.com/2021/04/08/is-deepfake-the-future-of-holocaust-memory/amp/>
- Deep Nostalgia of Frederick Douglass: <https://youtu.be/rxp5Rl1G70c>
- Deep Nostalgia of Anne Frank: <https://youtu.be/FfbamiR764E>