People Who Stare at Screens

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Figure 1: Apple Ad: "Behind the Mac," 2018

Source: Screenshot from https://www.youtube.com/watch?v=quppef3bH-s.

In the summer of 2018, Apple released a short promotional video, "Behind the Mac."[1] The view of the people shown is partially obscured by a laptop. The video is in typical Apple color[2] and shows people interacting with the Mac in a relaxed atmosphere, even in public. Their view is always directed at the computer, and the surroundings are no more than a picturesque backdrop for the actors (fig. 1). Cultural diversity is especially emphasized through ethnic diversity. The video ends with the slogan "Make something wonderful behind the Mac."[3]

1 The video is part of a campaign in which the company wanted to show how users use the Mac to work in a creative and innovative way. The campaign featured twelve individual stories of how artists*, developers*, and many others are using the Mac in their respective fields.

2 An aesthetic informed by the iPhone's algorithmically normalized shots.

3 The accompanying music is an astonishing choice. "The Story of an Artist" by the late singer-songwriter Daniel Johnston is a song by a mentally unstable, reclusive outsider to the music scene about the artist who was rejected and misunderstood by friends and family.

Almost two years later, the ad campaign continues under the same title, though the mood in the video "Behind the Mac—Greatness"[4] is different.[5] Black-and-white photographs are used almost exclusively, showing internationally known creatives alone in mostly domestic settings.

Figure 2: Apple Ad: "Behind the Mac," 2021

Source: Screenshot from https://www.youtube.com/watch?v=8kF5x2D3rqo.

The impact of the pandemic is an obvious part of the atmosphere: alone but safe from the virus, you should continue to work productively with Apple and communicate with others within the walls of your home. With the knowledge of the production of her last album, which she is said to have sung entirely at home, this condition is particularly noticeable in the image of Billie Eilish (fig. 2). The slogan "Never stop making behind the Mac," which is inserted at the end, seems more like a perseverance slogan.

With the onset of what we now describe as a pandemic situation, many people's relationships with their screens and their environments changed permanently. This change is made vivid in the promotional videos.

Pupils and students were sent home from school and university, and workers whose presence in the company was dispensable were sent to the home office. Those who could and were allowed to escaped a potentially infectious world into the safety

4 People shown are Tom Hanks, Kendrick Lamar, Gloria Steinem, Billie Eilish, RuPaul, Tarana Burke, Serena Williams, Spike Lee, Stephen Colbert, Lisa Simpson, Pharell Williams, Donald Glover, Takashi Murakami, and Saul Perlmutter. https://www.youtube.com/watch?v=b3VcGKv9Cfw.

5 Again, the campaign begins by observing individual creative people like James Blake and Tyler Mitchell.

of their home environment (fig. 3 a).[6] The screen became more than ever the window to the world as social contacts in lockdown were deficiently reorganized via the software-based interfaces of home computers. Andre Gunthert (2020) aptly describes this situation:

> We rediscover it every day in our digital exchanges: the image is not synonymous with presence. Countless pragmatic signs separate the experience of audiovisual mediation from the experience of face-to-face, which are not or poorly reproduced by connected digital tools. I cannot touch or hug my virtual interlocutor. And the mosaic of screens of a videoconference only offers a disembodied and distant imitation of the physical encounter with its different levels of communication. But the image is no less irreplaceable when the circumstances prevent a direct contact.

Figure 3 a–b: Left: "Child homeschooling," 2020, right: Francis Miller: "Children at Classroom TV during a school strike in Minneapolis," 1951

Source: Photo by author; The LIFE Picture Collection/Shutterstock.

I will use photographic images of people in front of screens to historically develop how the screen, and with it the mediated face, has invaded domestic environments. In video conferencing, these faces are brought into a reciprocal relationship and become the standard of privileged, contagion-free communication under pan-

6 With projects like Classroom TV shown here (Fig. 3 b), similar concepts existed much earlier.

demic conditions. A reduction of the body to the face[7] is central to communication in video conferencing.

Focusing on photographic testimonies,[8] I will address the screen as the subject of near human surroundings, rather than more generally addressing the *screen*[9] as canvas or projection. I begin this story with the television because it is about the promise of live broadcasting as a form of telepresence and tele-actuality.

In this respect, the text is about images of humans in front of the television and the computer.

The fact that these two technologies are inseparable today is due to the alliance they have formed. A computer (laptop, smartphone, desktop, etc.) is as much a TV as the TV is a computer. Both are now capable of running programs, sensory acquisition, and data processing.

The images in question here are stills of a relationship between people and their screens, which have themselves become mobile. They draw attention to a communicative attention to the screen that has changed considerably in the past ninety years or so. It is a long way from analog transceivers to the touchable interfaces of networked universal computing machines. The arrangements of the apparatus, which regulate the relationship of the human being to the screen and thus also shape the communication relationships among each other today, are to become visible in this way. It is worked out how the screen is linked to the spheres of the private and the working world and connects them in a new way in the (post)pandemic situation.

The photographs of Lee Friedlander, in particular, were the occasion to reflect on this relationship. Friedlander was very prescient in first drawing on the medial intrusion of the human face into private spaces, and later very attentively observing the instructions and observations of the monitor to the workers sitting in front of it.

An approach via photographs of people in front of screens is informative for the development of video conferencing since the images can be used to show how the screen establishes itself differently as a counterpart to be communicated with in the home and in the office and how the office and the home enter into an instructive

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7 This reduction is recognized at an early stage: "The face is a surface … The face is produced only when the head ceases to be a part of the body, when it ceases to be coded by the body" (Deleuze and Guattari 1987, 170).

8 However, these can also be screenshots or screencasts, which for me belong to photographic practices (Gerling 2018).

9 It is not possible here to go into the long history of terms often used synonymously with *screen*, such as the display as something unfolding, and the monitor as something monitoring (Gerling 2022). The noun *scren* already exists in Middle English and from the end of the fifteenth century. In the early twentieth century, *to screen* is also used as a verb to indicate the "process of filtering and excluding unwanted effects" (Frohne 2013, 257). On the complex history of the computer display, see Thielmann 2018.

unity with the introduction of the PC. These images are, in the best sense, testimonies of a subjugation into the physical bond with the screen, even if it becomes mobile.

Little Screens

Figure 4: Cover page: Funkschau, August 1935

Source: https://archive.org/details/funkschau-1935-heft-34.

In the early images of people in front of screens, the screen stands as a bulky object in space and is defined as a counterpart without a return channel.[10] One sits down in front of the device, which glows like a campfire (McLuhan 1964, 359).

In 1935, at the beginning of German television history, there are very few televisions in the living rooms of the first television nation,[11] and so recordings like the one

10 The historical approach I develop in the following is based on a text that unfolds a wide-ranging photographic history of images of people in front of the screen (Gerling 2023).

11 In 1935, driven by the National Socialists, regular public television began in Germany. Two hours per evening; three evenings per week. After radio, Germany also wanted to demonstrate its leading role in television.

shown above (fig. 4) are probably better understood as attempts to convey these apparatuses as a new medium, rather than as documents of everyday use at the time. With 1800 Reichsmark acquisition costs per device, it could hardly advance to the *Volksempfänger*.[12]

Figure 5: Germany's first Fernsehstelle (TV viewing station) set up on April 10, 1935, at the Reichspostmuseum

Source: Museum für Kommunikation https://twitter.com/mfk_berlin/status/850999324381204480.

The image from the first television station in the Reichspostmuseum in Berlin (fig. 5) testifies to the attractive character of the new technology and at the same time to a spatial situation that is uncertain in terms of the arrangement of the viewers. The small screen with 180 lines and low contrast doesn't allow for a larger viewing distance, but still a cinema situation is emulated.

For the time being, most people are reached in the public television parlors. Unlike the cinema, they also allowed live broadcasts. This is the beginning of a culture we now call "public viewing," and it reached an early peak with the 1936 Olympics as a propaganda tool of the National Socialists (Kubitz 1997, 22).

12 It is also during this period that the first experiments are made with the television as a means of video telephony (see Tollmann 2020).

Although designed for the home,[13] it was not until the years after World War II that the television became widely available in Western industrialized nations, especially in the United States. The television program aligns with the daily routine and needs of a growing white middle class. As Lynn Spigel (1992) has shown for the US, this development is closely linked to the sprawl of large cities that have become too crowded and to suburbanization.[14] This is associated with corresponding cultures, which in turn are reflected in television programming (Spigel 2013).

Pictures from that time show white families gathering around the TV and devoting themselves to new program together (fig. 6). They are stereotypical images of establishing a medium for family community. It is focused on staging an accessible culture for the suburban community.

Figure 6: Harold M. Lambert: A happy family cheerfully sits in their living room and watches a televised clown and puppet show, 1957

Source: https://www.cheatsheet.com/entertainment/anna-duggar-shocks-counting-on-fans-by-revealing-her-kids-watch-tv.html.

As early as the mid-1950s, every second household in the US had a television, which also became a central reference medium for current events such as sports and politics. TVs could be found in bars, pubs, and drinking establishments and quickly became standard equipment in hotels and motels too.

13 The production of the apparatus was discontinued in Germany in 1939 with the start of the war. For the history of television in Germany, see in detail Kubitz (1997).

14 Between 1947 and 1953, the number of people living in suburban areas of the United States increased by 43 percent (Rubin and Scott 2013, 454). In Europe, this trend sets in somewhat later.

Here, the television becomes determinant in the perception of politics and other national events (fig. 7).

Figure 7: Paley Matters: A typical American family gathered around the TV, which displays John F. Kennedy's face, to watch the debate between Kennedy and Richard Nixon during presidential election, 1960

Source: https://medium.com/retro-report/the-presidential-debates-will-be-weirdly-educational-this-year-e6a038135e8e.

John F. Kennedy (1959) writes one year before his election as president: "The searching eye of the television camera scrutinizes the candidates—and the way they are picked. Party leaders are less willing to run roughshod over the voters' wishes and hand-pick an unknown, unappealing, or unpopular candidate in the traditional 'smoke-filled room' when millions of voters are watching, comparing and remembering." The first televised debate on September 26, 1960, between Kennedy and Richard Nixon then drew some 70 million viewers in the US to their screens.

Figure 8: Jacques Lowe: "John F. Kennedy, with his brother Robert and Robert's wife, Ethel, behind him, watching election coverage at Hyannis Port, Mass. on the morning of Nov. 9, 1960," 1960

Source: *The Kennedy Years*, Viking Press, 1964.

With reference to McLuhan, Nicholas Mirzoff (2015, 148) describes the short phase of the global village shaped by TV that begins here:

> The period of the global village was, in retrospect, quite short. It extended from the death of Kennedy to the 9/11 attacks. In this period global television audiences watched dramatic events like the first moon landing (1969), the wedding of Charles and Diana (1981), the fall of the Berlin Wall (1989) and the 9/11 attacks (2001). So in the course of just fifty years watching a world-changing event became a routine consequence of technology, available to hundreds of millions of people who might have little understanding of how technology works. People who were alive at the time can all recall TV broadcasts when President Kennedy was killed, or the 9/11 attacks occurred. Today, news breaks as much through Facebook, Reddit, Twitter and other such applications as it does through television bulletins. Media no longer prize form as much as content.

Then, starting in the 1950s, artistic photographers turned to these screens. They belonged to a media environment that has become commonplace, which McLuhan

(1967, 26) describes in one of his most prominent turns of phrase: "any understanding of social and cultural change is impossible without a knowledge of how media work as environments." And further, he adds, how these environments become active: "Environments are not passive wrappings, but are, rather, active processes which are invisible. The groundrules, pervasive structure, and over-all patterns of environments elude easy perception" (McLuhan 1967, 69).

One of the first photographers to have an eye for the environmental activity of the screen is Robert Frank. Perhaps the most famous photographs can be found in his book *The Americans*. One photograph shows a television with the first televangelist Oral Roberts speaking into a deserted café (fig. 9 a). Another shows a television studio: the presenter disappears to the edge, behind a dark silhouette, while her duplication, limited to the face, appears in the control monitor (fig. 9 b).

Figure 9 a–b: Robert Frank: The Americans, 1958

Source: Robert Frank *The Americans.* New York: Grove Press, 1959 (originally published as *Les Américains*. Paris: Robert Delpire, 1958).

Common to both images is that faces appear on the screens, invading and visually occupying spaces.[15]

In 1961, Lee Friedlander began photographing a series of images that focused entirely on this invasiveness of the medium: *The Little Screens*. They are shots of American living rooms and bedrooms that, like Frank's TV images, mostly present faces on the screens, which invade deserted, pragmatically furnished domestic environments and develop an even stronger presence in the space (fig. 10 a–b) than in Frank's images. With the picture from Washington (1962), which shows only one eye on the television screen, the function of observing is anticipated as no longer unidirectional (fig. 10 c).

15 This kind of invasiveness is newly discussed and perceived fifty years later with the webcam built into the laptop as a control view. It's not for nothing that these cameras are often taped shut by their users today.

Figure 10 a–c: Lee Friedlander from The Little Screens: Left: "Florida," 1963, middle: "Philadelphia," 1961, right:"Washington," 1962

Source: Saul Anton: *Lee Friedlander: The Little Screens*, Afterall Books, 2015.

An important exception to this pictorial program is an idiosyncratic self-portrait: In a spectacular turn, Friedlander directs the camera to the floor and shows only his legs and feet, which find their eerie reflection in the TV (fig. 11).

Figure 11: Lee Friedlander from The Little Screens: "Pennsylvania," 1969

Source: Saul Anton: *Lee Friedlander: The Little Screens*, Afterall Books, 2015.

One could interpret this photograph as a culmination of Foucault's (1984, 4) well-known formulation:

> The mirror is, after all, a utopia, since it is a placeless place. In the mirror, I see myself there where I am not, in an unreal, virtual space that opens up behind the surface; I am over there, there where I am not, a sort of shadow that gives my own visibility to myself, that enables me to see myself there where I am absent: such is the utopia of the mirror.

In this image, the television embodies the utopia of the electronic mirror, which will only be realized in the computer. This electronic mirror has been normalized with the front camera in the smartphone and the camera in the laptop display[16] and has preconfigured the visual conditions for video conferencing. The self-image in these mirrors is, with selfie, video telephony, and video conferencing, an image that is always already intended for others and that is un-mirrored for them. In the "unreal, virtual space" of video conferencing these self-images are results of, as Christian Andersen and Søren Pold point out in this book, entanglements of faces and interfaces.

At Work

The early images of people working with screens are shots of the inventors posing in front of the screens and presenting the screen as the result of their research. They are documents of a scientific achievement that establish the screen as a special object and stage it as something desirable.

Most of them are posed images, as exemplified by the picture of Manfred von Ardenne, the inventor of electronic image transmission, from his laboratory in 1932 (fig. 12). These photographs show men working on technical equipment, next to rather than in front of the screens, because they are to be exhibited as new technology. The screen is often staged like another protagonist.

In 1954, David Sarnoff stands proudly in front of the first flat screen, an invention of his company (RCA), on which a picture of Jane Russel can be seen (fig. 13).[17] The technical object thus becomes doubly charged and paints a picture of a technology conceived by white men and whose "male gaze" (Mulvey 1975, 11 ff) frames as a double desire as a matter of course. "The male protagonist is free to command the stage, a stage of spatial illusion in which he articulates the look and creates the action" (Mulvey, 13).

16 The basis of this possibility is the webcam, first integrated by Apple since 2005 as the so-called iSight camera in their laptops and desktop computers such as the iMac. The front camera on the cell phone was introduced as early as 2003 with the Sony Ericsson Z1010 for business video telephony.

17 Russel had contracts with RKO Pictures of which Sarnoff was chairman for a time.

Figure 12: Manfred von Ardenne, 1932

Source: Ullstein Bild.

Figure 13: David Sarnoff, 1954

Source: Everett Collection Inc.

Figure 14: Lisa team at Apple: Paul Baker, Bruce Daniels, Chris Franklin, Rich Page, John Couch, and Larry Tesler, ca. 1982

Source: https://www.mac-history.net/apple-history-2/2019-02-09/parc-scientist-larry-tesler-recalls-jobs-famous-xerox-visits.

This does not change significantly with the early pictures of the PC's development, but the PC will decisively change the relationship to the screen.

With the establishment of the PC, the work behind screens quickly changes into a serving work with or at screens, as evidenced by the pictures of people taking a seat in front of a screen and working with it (fig. 15). The term *workstation* is symptomatic of this.

Figure 15: Larry Tesler at his Xerox Alto workstation, 1973

Source: Xerox Parc, https://www.latimes.com/business/story/2020-02-21/larry-tesler-dead-steve-jobs-personal-computer.

In a history of images of work on or with the screen, images of women would have to be given their own place. They are more often seen as an object on the screen than in front of the screens (Comstock 2014).

As in many histories, images showing women in positions of responsibility in development tend to be underrepresented. For example, very few images show the conditions of manufacture[18] of the early entertainment industry or women working with calculating machines.

One of the few exceptions is a *Cosmopolitan* article by Lois Mandel (fig. 16). However, computer pioneer Dr. Grace Murray Hopper tries to appeal to the magazine's readership by equating programming with housekeeping: "It's just like planning a dinner. You have to plan ahead and schedule everything so it's ready when you need

18 In the United States in the mid-1950s, nearly all workers in the electronics industry were female. Starting in the 1960s, manufacturing shifted to Latin American and Asian countries because labor was much cheaper there. This does not change with the production of the new technology of computers: for example, Fairchild Industries, a manufacturer of computer chips, employed female Navajos from the mid-1960s onward to produce integrated circuits (Donovan 2016).

it. Programming requires patience and the ability to handle detail. Women are 'naturals' at computer programming."

Figure 16: "The Computer Girls"

Source: *Cosmopolitan*, April 1967.

As recently as 1978, in an advertisement for the Apple II, a clear role is attributed to women.[19] The master of the house works relaxed in the modern equipped kitchen

19 Ignoring the reality that until the mid-1980s, nearly 40 percent of people working in the computer sciences were women. It was not until the introduction of the PC that the dominant notion of the white male nerd prevailed (cf. Thompson 2019). Another blind spot in this story is the part African American Women play in the context of Computer Sciences. They played a not insignificant role at NASA beginning in the 1950s with Katherine G. Johnson, Dorothy Vaughan, Melba Roy Mouton, Mary Jackson, and others (cf. http://blackwomenincomputing

at the screen—which is still a TV—while his wife is fittingly cutting apples in the background (fig. 17).

Figure 17: Apple Ad

Source: *Byte Magazine*, Jan. 1978.

One thing this promotional image does show, however: while the TV usually found its permanent place in the living room, the PC had not yet found its place. As Sophie Ehrmanntraut (2019, 152) writes in her study of the discourse history of the personal computer:

> The PC has been staged as a friend of the family, helping children with learning, parents with household chores, and bringing the family together to play. PCs should not dictate, should not set limits, but should empower their users. … the companies [had to] lower their expectations of the market, or the users their expectations of the magical capabilities of the computer. Many computer laymen first had to learn that computers didn't do anything on their own.

The notion of the computer as a machine that brings people together and should be operable without special knowledge was coined by Mark Weiser (1999, 693–694):

> The program was at first envisioned only as a radical answer to what was wrong with the personal computer: too complex and hard to use; too demanding of at-

.org/who-we-are). Their percentage share was and still is very low (see: https://en.wikipedia.org/wiki/African-American_women_in_computer_science).

> tention; too isolating from other people and activities; and too dominating as it colonized our desktops and our lives. We wanted to put computing back in its place, to reposition it into the *environmental background*, to *concentrate on human-to-human interfaces* and less on human-to-computer ones. [emphasis W.G.]

The computer should fit into an everyday environment as an intelligent machine (Weiser 1991).

However, it is already established as a workplace before the PC successfully enters the private sphere. This is shown in the image of an early industrialization of screen work by Allan Sekula (fig. 18), who in his critical investigation into the normative arrangement of schools *School Is Factory* (1978–80), photographs new forms of training to low keypunch work[20] on the computer.

Figure 18: Allan Sekula: School Is Factory, 1978–80

Source: *Allan Sekula—Photography against the Grain: Essays and Photo Works 1973–1983*, MACK Books, 2016.

20 "The junior college delivers a lot of students, mostly women, to surrounding corporations with a need for clerical and low-level computer workers. Keypunch is the lowest level of computer work, rivaling the assembly line in its brain-numbing routine" (Sekula 2016, 203). It should be noted that this work did not take place on electronic displays but on specially constructed machines that produced analog paper output in the form of punched cards (Da Cruz 2001).

Lee Friedlander follows up here. Some of the images from the Silicon Valley of the eastern US are shot frontally from the perspective of the screen and stage the screen as a counterpart that has its operators firmly in its sight (fig. 19 a–b).[21]

Figure 19 a–b: Lee Friedlander: Left: "At Work"; right: "Boston," 1985

Source: *Lee Friedlander—At Work*, Steidl, 2002.

At the same time, the serial of the open-plan office is shown as the production site of a cognitive capitalism that puts its workers into interchangeable modular environments.

A strange uncertainty arises when looking at these pictures: Who is actually looking at whom?

The operators in Friedlander's images look as if they are being monitored by the monitor. The meaning of the Latin word *monitor*—"reminder, admonisher, overseer"—is fulfilled in a special way.[22] Friedlander points to an aspect that will only be realized in the automated controls of the screen workers or the mutual control of the video conference. In video conferencing, with the same perspective however, it is the programmatic control that maintains command. Just as the participants see

21 This perspective has appeared regularly in some recent photographic work. As, for example, in the work *Immersion* (2008–2014) by Robbie Cooper, which shows people sitting in front of the computer being greatly focused on the game, the film, the football match or the porn website. https://robbiecooper.com/portfolio/immersion.
In some cases, the person facing the screen is shown somewhat less differentiated at the moment of greatest blunting:
Donna Stevens: *Idiot Box*, 2013, http://donnastevens.com.au/idiot-box/donna-stevens
Wolfram Hahn: *A disenchanted playroom*, 2006

22 Contemporary images of working at a computer screen suggest a different situation, one that does not separate work from leisure. These are images of a new economy that propagate the interpenetration of work, creativity, and leisure. See the Apple campaign mentioned at the beginning: "Behind the Mac."

themselves mediated by the software, they see the others as mediated by the apparatus.

Lars Tunbjörk's pictures, on the other hand, show the chaotic, materially exuberant nature of these workplaces (fig. 20 a–b). In doing so, he focuses on the one hand on the environment that people create for themselves in the office and on the other hand on the stress of the never-ending stream of data that doesn't even allow you to dispose of the old equipment before turning to the next monitor.

Figure 20 a–b: Lars Tunbjörk: Office, 2001

Source: *Lars Tunbjörk—Office / Kontor*, Journal, 2002.

This shows the flip side of the individualized user-related programs of today's platforms of the World Wide Web: with the individual diversifying their individuality for the lowest wages on multiple screens to click on website elements that artificially elevate the status of a customer or product.

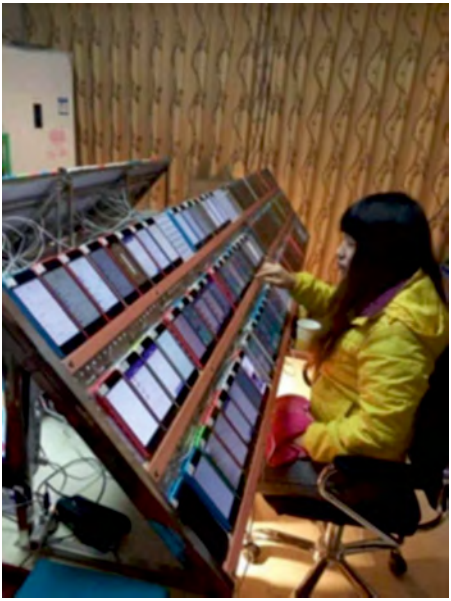
Such precarious click jobs of an invisible digital economy can now be found in hundreds of thousands around the world.[23] So-called content moderators, who sort out everything we should not encounter on social media platforms, scan operators at Google Books (Bergermann 2016), or the Mechanical Turks at Amazon. Jeff Bezos euphemistically calls this work "artificial artificial intelligence" and describes the concept behind Amazon's profitable business model:

> Normally, a human makes a request of a computer, and the computer does the computation of the task, but artificial artificial intelligences like Mechanical Turk

23 Typically, the work is performed by women from lower social classes in Southeast Asia, especially from India, China, and the Philippines, but also people of color in the US at Amazon and Google. See the documentary *The Cleaners* by Hans Block and Moritz Riesewieck (2019).

invert all that. The computer has a task that is easy for a human but extraordinarily hard for the computer. So instead of calling a computer service to perform the function, it calls a human. (Pontin 2007)

Figure 21: Image of a Chinese click worker used in many social media posts exploring these kinds of working conditions



Source: Origin unknown. https://www.clickguardian.co.uk/click-farms/.

A work that invisibly labors at the functioning of an energy-consuming digital reality in order to maintain its myth of purity and immateriality. These images testify that this work is not decoupled from life as "artificial intelligence" and an exuberant materiality.[24]

This materiality is one that is often forgotten when we talk about video conferencing. The workability of the infrastructures is taken for granted and the pandemic

24 Part of this functioning, especially in a pandemic world, is that goods reach us without resistance. A growth of this economy is closely related to it. Little was heard in April 2020 about Amazon employees going on strike over poor hygiene and spacing rules at Amazon's goods distribution centers (Blest 2020).

ensured a further spread (Pressmann 2021) of the necessary technical means: laptop, camera, (ring-)light (Mull 2020), and microphone.

Home Work!

Man's relationship with their screens have become different through the pandemic. The screen is meant to protect against infection (Moskatova 2020), but at the same time it reconstitutes, as Simon Strick (2012, 234) has pointed out,

> the interaction between body and machine in the paradigm of a smooth surface and touchless intimacy, which makes any possibility of illegitimate use and intrusion impossible. The inside of the technology—the code—is sealed and immunized, its use becomes simple, personal, productive and non-invasive thanks to metaphorical touchable images (icons).

Thus, our daily counterpart is protection and an insurmountable surface, the suggested closeness disappears behind the glass layer of the display. And the "visually mediated present presence" (Villi 2015) remains a presence that is no more than a social copresence on the screen governed by software conditions. Gazes that cannot meet one another (see Rapoport and Tollman in this book).

"Computers embody a certain logic of governing or steering through the increasingly complex world around us. By individuating us and also integrating us into a totality, their interfaces offer us a form of mapping, of storing files central to our seemingly sovereign—empowered—subjectivity. By interacting with these interfaces, we are also mapped" (Chun 2011, 9).

These conditions are regulated by Skype, Zoom, MS Teams, BigBlueButton, Jitsi,[25] etc. This creates images of people turning to the screen with communicative intent, which have also been used in various ways in the mainstream media since at least the beginning of the pandemic. The provisional aesthetics of the image is always part of the communication. Photographs, screenshots, or screencasts of people in front of or on screens reveal themselves as coming from the screen.[26] Of course, this is especially true for video conferencing.

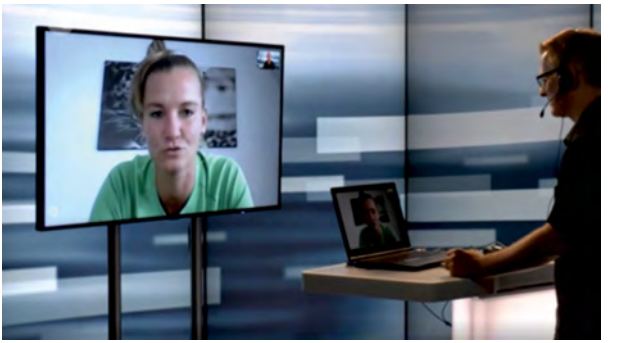
The laptop is usually positioned slightly below the face on the table, looks up unfavorably to the protagonist, and the algorithmically blurred background allows the software identify through which the image is conveyed. The image on the monitor

25 Like Amazon, the winners of this form of disaster capitalism as an exploitation of the Corona crisis for private profit (Klein 2007).

26 The screenshots in the following section are made by the author. Similar images were also used in print media to depict everyday media life under pandemic conditions.

shows an unveiled face, which is/was often no longer possible under pandemic conditions in public. It thus displays an openness in the protection of the screen and, at the same time, the privilege of a work that does not have to expose itself to any risk of infection.

Figure 22: Alexandra Popp, a player on the VfL Wolfsburg football team, talking to Hermann Valkyser about the re-start of the women's Bundesliga in Germany (30 May 2020)



Source: Screenshot from live TV.

Through these images, one no longer simply sees through to the protagonist, but one registers a mediation of mediation. They are second-order images (Mitchell 1994, ch. 2, and Schneider 2022), media-reflexive images that consciously exhibit their status. The supposed immediacy of the transmission is destroyed in this gesture.

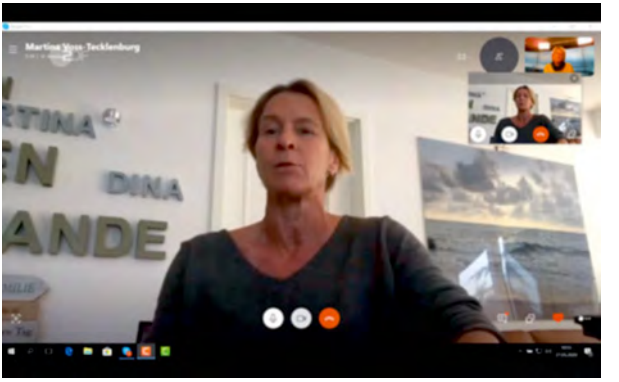
They are images of a media-"media witnessing," as I will call it by extension of the term introduced by Paul Frosh and Amit Pinchevski (2009). The content of the medium becomes the medium itself and not another medium, as McLuhan (2013, 22–23) and many following him have presented as the principle of medial mediation. Of course, this only works under the conditions of the computer as a metamedium (Manovich 2013, 101 ff.), which now combines all forms of (tele)presence. These images become testimony to a relationship to the world in which personal relationships—to the world and its subjects—also reveal themselves as mediated by the screen.

Interview pictures are making their way into the news of relevant broadcasters in inferior quality and, similar to the shaky smartphone pictures of a few years ago, testify to a particular urgency, topicality, or authenticity (Grittmann 2018).

"Almost all of the interviewees tune in live via Skype. The picture is a bit jerky, most of them are seen in a frog perspective from the chin up, but it works. Before

that, we did everything we could to avoid poor quality Skype switching. Now we've already gotten used to the aesthetics" (Fiedler 2020).

Figure 23: ZDF reporter Claudia Neumann speaks to Martina Voss-Tecklenburg, Germany's national women's football coach, about the Corona crisis and its impact in a Skype interview, March 27, 2020



Source: Screenshot from live TV.

Figure 24: "Hart aber fair" with Frank Plasberg, May 2021

Source: Screenshot from live TV.

The continuing to function is central to the transmissions at the beginning of the pandemic and generates an acceptance of this aesthetic. Since then, these images

have been used naturally in talk shows to replace the presence of people in the studio. This is often used in stagings that place the monitor instead of the interlocutors in order to be streamed into the households in a doubled telepresence.

While the self-representation at the beginning of the pandemic still seems very provisional and unstaged, this changes in the course of 2020. Looking into the mirror image[27] of the computer awakens attention to the surroundings, to one's own face, and to the camera position (Mende 2020). The self-image and thus the background in video conferences professionalizes[28] with increasing use.

In the Mirror

In networked photography, the connection between photographer and recipient is discussed as a production of presence through mediality and technology (Distelmeyer 2021) and as an expression of a culture of *being there* (Vannini and Steward 2017, 152). In the real-time[29] mode of video conferencing, it can be described as a culture of *being with* (*Dabeisein*),[30] which is a two-way relationship. *Being with* means that I know I am there on the screen and am in an active negotiating relationship with my counterpart. This includes the possibility of acting at a distance and entering a relationship of interaction with the physical world regulated by technology.[31]

Although I excluded the selfie as an image type for this study at the outset, selfie research is informative for the nature of self-(re)presentation or presentification and its modes of communication. The staging of the face/body against a picturesquely chosen background is programmatic in the selfie. What differentiates selfies in video conferencing, however, is that they are usually recorded with the laptop's camera and, accordingly, are not as mobile as those on the smartphone.

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27 Kracauer (1927, 34) already wrote of the "photographers' face" that people had acquired in view of the cameras that were everywhere.

28 This can be seen in the selectable background images, the filters that, for example, smooth the skin and automatically brighten the image, etc.

29 In computer science, real-time aims at establishing an input-output connection that is as unmediated as possible. The distance is supposed to become meaningless for human perception (Otto and Haupts 2012, 6). However, this is a recurring problem in video conferencing, as different bandwidths and compressions cause users to experience the lag in different and sometimes isolating ways.

30 This becomes particularly clear when the smartphone is carried through rooms to give the other person an impression of the place where one is currently located.

31 A feature of the software of the networked computer that, in the context of the pandemic, photographers increasingly had to make use of for economic reasons in order to take professional photographs from a safe distance (Li 2020 and Hein 2020).

While in PowerPoint or Keynote presentations in physical space only the desk (background) of the respective computer is ever revealed, in VC the physical background of the desk is in the picture and wants to be made real or digitally enhanced.

The faces, unlike in Friedlander's *Little Screens*, are actually intruders into the private sphere. But they are also the alien mirror images that Friedlander anticipated. I look at myself like another person:

"Since photography is first of all dependent on its apparatus and then, only in a secondary manner, on the body of the photographer, it allows for views of the self to be severed from the body and framed from an external point of view, one that others may occupy just as well" (Keenan 2018, 72).

The aspect that I and others share the same point of view is central to self-image in video conferencing. Unlike the production of a selfie, I see myself in comparison with others, lined up in a two-dimensional tile grid[32] of the respective software. What Tom Holert (2006, 12–13) describes in the context of the visual doubling of a person and their visual representation in a background projection now applies to everyone in video conferencing: "The visual double becomes a kind of control image, that viewers can—in the medium of photography—compare between two stages or aggregate states of the image, measure or test."

The relationship to the *screen-based device* during recording is described by Sabine Wirth (2018, 132):

> Furthermore, the selfie act includes certain knowledge of the operativity of user interfaces as well as a habitualization of media gestures. Taking a selfie encompasses practices like positioning one's body in relation to a screen-based device, fitting oneself into the framework of the smartphone screen, posing, smiling/not-smiling, checking for different angles and backgrounds … using filters, playing around with formats and app functions—in short: operating a user interface. Thus, the act of taking a picture is … in the case of the selfie between photographer and screen interface.

In video conferencing, it is precisely the background that takes on special significance, as shown by Alexandra Anikina in this volume.

The self-image of video conferencing becomes an interface and is an operational mirror image that reacts differently than a catoptric mirror image (Hagen 2021, 163ff). I can digitally influence and enhance it almost in real time, but then look at me not only like another person but also like a stranger. That is why it is possible to unreflect the self-representation in video conferencing or to hide the image

32 On the problem of two-dimensionality in video conferencing, cf: Palmer 2019 and referencing Covid 19: Palmer 2020.

altogether because of the intolerability of constantly seeing one's own face in comparison to others.[33] I no longer see myself where I am not, but only the processed mirror images of all the other participants in the video conference. Perhaps this is the only option to escape the domination of the camera: "The subject can only play an active role vis-à-vis the camera or the gaze regime if it resists the appropriation on the part of the images through which it willingly or involuntarily allows itself to be 'photographed.' Only in this way can it deal with them transformatively" (Silverman 1997, 50).

Techno-Imagination

I have attempted here to show how the story of human interaction and communication with electronic screen media can be told through photographic evidence. This relationship today goes further than Huhtamo (2004, 31) who very generally but aptly describes the relationship to the screen: "An increasing part of our daily lives is spent staring at screens." The inactivity associated with staring at the screen is confirmed on the one hand by the spatial bondage to the screen (Friedberg 1996, 28); on the other hand, the action that is now directly associated with the screen has long since ceased to be reducible to staring.

The images I discussed in the section "Little Screens" address the spatio-temporal perforation that began with television and a conditioning of people to these screens in the domestic environment. Related is the intrusion of alien faces into these private domestic spaces. "At Work" reconstructs how the computer screen monitors the conditions of a materially exuberant postindustrial labor. In the section "Home Work!" I show the pandemic driven temporary climax of the mutual real-time transmission of human faces with communicative intent. Here, the distinction between work and private spheres is becoming increasingly problematic due to video conferencing. "In the Mirror" is an attempt to describe the gaze relationships under the conditions of video conferencing as operative mirror images.

33 Platforms like Zoom have significant potential for gesture and emotion recognition. So far, the platforms hardly seem to be taking advantage of this. However, for the application of the "video filters" and the "studio effects," AI controlled face recognition and tracking is in use. Zoom is already evaluating gestures and translating them into digital symbols in a simple way, like the "thumbs up" symbol, which is an easily identifiable gesture and should be more visible as a symbol in such meetings (https://support.zoom.us/hc/en-us/articles/440753740 6093-Using-gesture-recognition-). However, it is hard to imagine that the "face value" (McCosker and Wilken 2021, 34 ff) produced in this environment will not be used algorithmically in the future.

Historically, the community-building nature of television was followed by a phase of isolation in front of the screen that continues to this day. Thus the image in video conferencing testifies to a history of the postindustrial computer workspace in the domestic context and thereby to a new form of automatization of the gaze that is operationally machine-conditioned, even if cloudy backgrounds want to obscure this as a new immersive experience. "The question, then, is not what we can use the software to do, but what the software does to whatever it is being used to do" (Bucher 2012, 204).

Figure 25: Zoom: Immersive View

Source: https://blog.zoom.us/zoom-immersive-view-bringing-people-together-better/.

The community is to be formed in a collective techno-imagination behind the screens. This makes our sociality stronger than ever "coded by technology … renders people's activities formal, manageable, and manipulable, enabling platforms to engineer the sociality in people's everyday routines" (Van Dijck 2013, 12).

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