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Superimposed, Still

A man in a white shirt and dark tie, microphone pressed to his upper lip, addresses a viewer, us, with his voice. But his eyes are focused on another task (Figure 1). Superimposed on his face is the text that, somehow, we know to be the focus of his work: "STATEMENT ONE: WORD WORD WORD . . . ," with "WORD" repeated another ten times followed by an ellipsis. The image I'm describing is a still, an extract. This particular still superimposes two video feeds that are themselves intricately mediated: the first image results from pointing a video camera, at very close range, at a small circular calligraphic monitor that hosts the text ("WORD WORD WORD . . ."); the second results from angling another camera, also at very close range, up at the face of the computer user as he himself stares into a terminal networked to a time-sharing computer. On that terminal, the user, the man in a tie, sees the same text that we see superimposed on his face. The effect is strange, estranging. It is also an invitation.

    Such a still doesn't freeze or extract; it agitates the proceedings. What it agitates in these two particular video feeds is their aspiration to establish a space for living, dwelling, working that was to be a training in a style of personhood. *Computational personhood* is one kind of shorthand for the style I want to describe. But whiteness is another, a racial whiteness constituted less as an identity and more as a possibility, an aptitude, an attitude made possible in and as the graphical screen that Douglas Engelbart here demonstrates. Superimposition names the video technique that made the demonstration both illustrative and a marvel. But it will also turn out to be a better name for the infrastructure provided to whiteness by the graphical screen being demonstrated, one that no longer relies on a politics of *re*presentation so much as a graphics of *super*imposition.
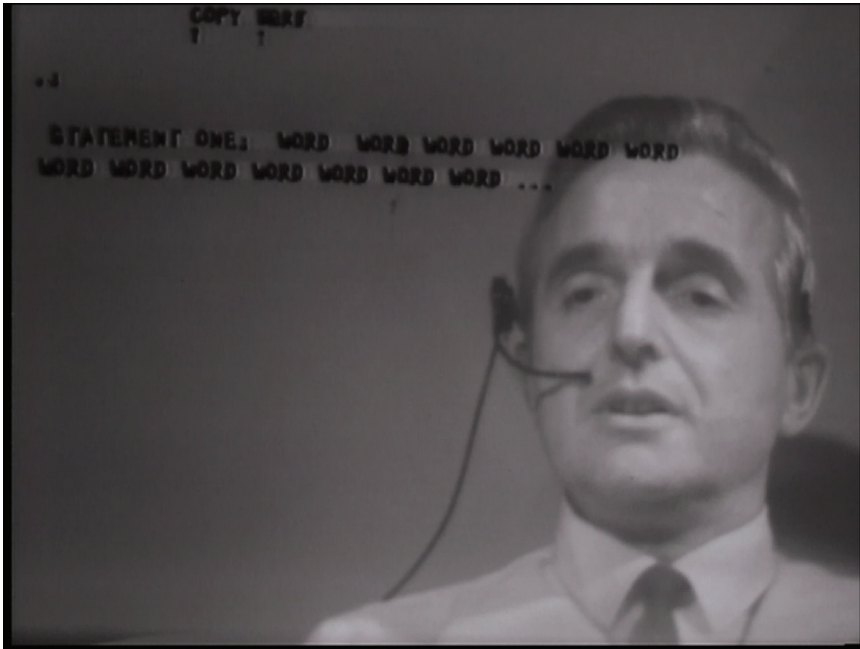
Figure 1. Still image, from Douglas Engelbart's demonstration of the oN-Line System (NLS) at the 1968 Fall Joint Computer Conference, San Francisco, CA, December 9–11, 1968.

That some readers will already know too much about the event that I'm describing while some will have no idea what I'm referring to is itself telling of the particular kind of oblivion into which Engelbart's demonstration of an early graphic computer interface has fallen: both too historicized and not enough. The effect of the superimposition is therefore a strange amalgam. The temptation will be to see it as an allegory, the user superimposed into the new graphicalized field of a computer terminal—an allegory of capture, say, or conscription. But the effect is actually more literal than allegorical. The story I want to sketch briefly, with the still as historical agitator, has to do with how this graphical space generates the racial constitution of the personal computer user.

The still is from the demonstration that Engelbart and his team performed for an audience in 1968.[1] As described on the website of the

1   That demonstration can be watched in full at https://www.dougengelbart.org /content/view/209/448/. In focusing on this event, there is a danger of overde- termining the history of the personal computer with too much focus on Douglas Engelbart. As computer historians rightly note, Engelbart was not the only person working on the problem of how a human was to interface with a computer built to the scale of the personal. Engelbart's work at the Stanford Research Institute in the 1960s and 1970s is not synonymous with the personal computer or with the graphical user interface (GUI), nor is it their origin. Indeed, Apple Computer, Inc.'s eventual mass marketing of the GUI and Xerox PARC's first technical implementa- tion of the GUI diverged from Engelbart's designs as much as they borrowed from them. See Laine Nooney, "How the Computer Became Personal with Laine Nooney,"

Defense Advanced Research Projects Agency (DARPA), a funder of Engelbart's work, "Engelbart's terminal was linked to a large-format video projection system loaned by the NASA Ames Research Center and via telephone lines to a [Scientific Data Systems] 940 computer (designed specifically for time-sharing among multiple users) 30 miles away in Menlo Park, California, at the Augmentation Research Center, which Engelbart founded at SRI [the Stanford Research Institute]. On a 22-foot-high screen with video insets, the audience could see Engelbart manipulate the mouse and watch as members of his team in Menlo Park joined in the presentation."[2] White button-up shirt, dark tie, the insinuation that a sports jacket has recently been removed—this human figure is superimposed on or into the field of the computer screen (whether *on* or *into*, it is in the nature of the graphical screen to render all prepositions inadequate). That field is in some ways most remarkable for its blankness, the fact that there is almost nothing in it, including, crucially, no evidently gridded field regimenting input. Beneath the user's superimposed face, which floats in a green-gray field, the text—really a placeholder for text, itself empty—reads: "STATEMENT ONE: WORD WORD WORD . . ." As the superimposition insinuates, marks could be laid down anywhere in this nothingness. The visualization of Engelbart's wife's grocery list, which makes an appearance later in the demonstration, reinforces the effect of this blankness, in which lines can connect point to point in a seemingly-open vector field—information creating its own playground. This free play of information grants Engelbart, a proxy for the user to come, some distance from the feminized labor of grocery shopping even while appearing to help with that labor.

The user stares forward with eyes focused but not on us; the address of this face is not to an audience. Or rather, it's an address to the audience by way of an address to the self that is both performative and practical: Engelbart wants his audience to see him focused on the screen, inhabiting that environment. He must have rehearsed this disposition toward the screen, since it would not have been easy to manipulate the screen in a way that demonstrated its ease of use while talking to an assembled audience that he could not see. So the eyes stare into their task, which is this statement standing in for all of the other statements that could come to exist in its place, superimposed on the user's forehead but from which the user is mostly offset, leaving the majority of the screen's expanse, its openness, available for the implied and ongoing elaboration of that statement.

This human, we realize, is not that statement's source but its manipulator. Neither human nor statement exceeds or precedes the other; they co-exist, as though equals. That fact is important. Manipulation *is* authorship in an information space like Engelbart's graphical screen; that environment makes manipulation feel like authorship in full by catching the sensorium up

May 15, 2019, in *The Next Billion Seconds*, produced by Mark Pesce, podcast, https://nextbillionseconds.com/2019/05/15/episode-3-07-how-the-computer-became-personal-with-laine-nooney/; and Thierry Bardini, *Bootstrapping: Douglas Engelbart, Coevolution, and the Origins of Personal Computing*, Writing Science (Stanford, CA: Stanford University Press, 2000).

2   Defense Advanced Research Projects Agency, "Mother of All Demos," accessed January 3, 2022, https://www.darpa.mil/about-us/timeline/the-mother-of-all-demos.

to the technical regime it now inhabits. The interface being demonstrated is a command and control fantasy with the self as its command center *and* the target of its operations. One might expect this from a proto-graphical interface that resembled (and re-assembled) the Semi-Automatic Ground Environment (SAGE) air defense system of the early 1950s as much as it predicted the later graphic interfaces of the Apple operating system.[3]

If the visual field seems to surround the human in this image, the field's work is nevertheless to impart the feeling that the human surrounds the computer, crowding it out into invisibility or marshaling it into a metaphor of servitude. In contrast, the user of the command line interface (the human-computer interface that is being consciously superseded by the system modeled in this demonstration) issued commands, orders. That was a relation of mastery, a relation manifested most emphatically in the moments when the computer, by way of a bug or glitch, short-circuited that mastery, mocked it. But the human superimposed onto the computer inside the graphical screen doesn't issue commands; they collaborate, they manipulate, they enter and remain, they dwell as though in an environment, and they tinker, now a part of the computer's hard- and software.[4] The user is in command, but it's a soft power, a power over what feels like form and formalism rather than people, over what Engelbart analogizes in the demo to a "completely blank piece of paper."[5] Meaning, the graphical screen grants a capacity to have capacities as well as a kind of autonomy that will become the basis for connecting with other people through a network of information (just as Engelbart here is connected to his team around California).

This is what matters to the racializing work of the graphical screen—not that this user is white, or that he wears a white button-down shirt and a dark tie or styles his hair with a wetted comb. What matters is that this user embodies a promise. A promise of superimposition, of the formalism of that relationship. Whatever I am, whatever I become, I will be superimposed upon whatever environment I come to occupy: graphical screen, web browser, social media feed. And reciprocally, also by way of superimposition, I will generate myself through that same interface, the augmented self, the self both literalized and idealized. In this sense, it matters less that the interface was made *for* white people or that it was made *by* white people (though both of these things are true). What matters is that it was made in the image of whiteness as a structure of superimposition. Racial superimposition doesn't require race consciousness; in fact, it rewards thinking beyond race toward a raceless future that can feel reparative, although only to the never-raced. In this precise sense, the graphic interface takes what had always been operative in public space and makes it into the operating logic of the personal computer. This promise is what is being demonstrated in the demo, which

3   Peter Galison, "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision," *Critical Inquiry* 21, no. 1 (Autumn 1994): 228–266, https://doi.org/10.1086/448747.

4   For more on the entanglement of the human and software, see Wendy Hui Kyong Chun, *Programmed Visions: Software and Memory* (Cambridge, MA: MIT Press, 2011).

5   Douglas Engelbart, "A Research Center for Augmenting Human Intellect" (paper, 1968 Fall Joint Computer Conference, San Francisco, CA, December 9–11, 1968), https://dougengelbart.org/content/view/140/.

realizes that promise while advertising it. In this, as in so much of computational culture, realization and representation collapse into each other; the graphical screen helps effect that collapse.[6]

The filmic technique of superimposition gets at that collapse through juxtaposition, insists that collapse be seen *as* juxtaposition, a productive relationship rather than an erasure or obfuscation. The graphical screen doesn't subsume the computer to the user, or the user to the computer; it lets them co-create each other, inside a relationship that aggrandizes the self as autonomous, creative, and well supported by technology. This is what Engelbart, the user, explicitly demonstrates—offers to his viewers. The promise is that this screen, which *is* a computer by way of the collapse rendered here as juxtaposition, will create the conditions for a type of work that feels unconstrained. *Unconstrained* here means a set of constraints so light that they give way before the vivacity of the self, but a self made better by the augmentative relation offered precisely by way of the computer's withdrawal in favor of what feels mostly like an open field, a graphical screen. *Unconstrained* also refers to the graphical surface, which is so blank, so unassuming, that it can be inhabited as little more than a space for the realization of the self's creative impulses.[7] And that self's capacities are meant both to appear and to feel as unburdened as the user who dreams them up. Just the self and an infinite possibility for making statements. Just the self and some graphed lines. Just the self and a graphical field in which that self was realized in the psycho-motor etching of hand into screen by way of cursor contrail. Everything in this interface was meant to feel as though it were the trace of the user's self, even though that self was being newly lived, re-imagined to live inside information.

This has long been a power of whiteness: to come into an augmentative relationship with the stuff with which it populates the world. The pressure of the computer screen's layered conflation could have been immense, could have been alienating, could have placed the self in service of the computer as an alienating force. The feat of Engelbart's screen was to make the computer's augmentations feel light in order to convert the self into a performance that felt most possible, even most autonomous, when it was "augmented" by its devices.

Like every aspect of the history of whiteness, and computing, that ease comes at someone else's expense. Laine Nooney argues that the history of

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6   I take this to be one of the key points made by recent media theories of temporality. See Brian Massumi, *Ontopower: War, Powers, and the State of Perception* (Durham, NC: Duke University Press, 2015); Anaïs Nony, "Anxiety in the Society of Preemption: On Simondon and the Noopolitics of the Milieu," *La Deleuziana* 6 (2017); and Shane Denson, *Discorrelated Images* (Durham, NC: Duke University Press, 2020).

7   Information theory provides the formal vocabulary for this realization (e.g., "WORD WORD WORD WORD WORD WORD WORD WORD WORD WORD WORD WORD WORD WORD"). In information theory, the promised value of information resides precisely in the schematism of the word chain: not the semantic content of a message, but a statement's capacity to stand in for the flux (or noise) of actual communication. In this, any statement can model the possibilities of any communication whatsoever. Alan Liu, *The Laws of Cool: Knowledge Work and the Culture of Information* (Chicago: University of Chicago Press, 2004); and Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (Boston: Houghton Mifflin, 1950).

the personal computer—and Engelbart is demonstrating one key starting point for that history—is a history of pain, a history of the ways in which the individualized computer terminal disciplined the sensoria of its users. The computer becoming personal shifted not just work but the responsibility for sustaining and structuring work onto the user, entailing the unequal distribution of pain.[8] Eye strain, neck pain, toxic boredom, and disaffection with one's work . . . these all resulted, as Nooney documents, from the ways that the computer automated work. *Automated work* is how Engelbart might have put it, implying a generality if not a universality, something that could apply to any human if only that human was willing, had the right attitude— but in practice, women and women of color both bore these impacts while shielding their bosses from them.[9] Today, $1,000 ergonomic chairs play that prophylactic role so everyone's conscience can be clean. But the pain would come for all.

In the still that I've been describing, the graphical screen that appears as an agitated space of inhabitation screens the white conscience from this longer racializing history of the labor of computation. It does so through its openness, its featurelessness, its adaptability to the self, its co-situating of human, computer, and computing environment as though they existed on equal terms without bio-markers or distinctions. In other words, the graphical interface routes racialization around its representational moorings, establishing it anew in the post-representational space of the graphical screen.[10] The user whom Engelbart proxies doesn't precede the work they do in the graphical screen, as biographical creator with racial or gendered features; they get generated anew in the process of inhabiting the screen. They are born alongside the machine that is now less a technology than an augmentation, a relationship, an environment for the rebirth of the human as clean again. Here, the version of whiteness that begins, historically, in a masculine gendering so it can also end there de-natures itself into a kind of post-identity format through the promise of the graphical interface.

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8   Nooney, "How the Computer Became Personal"; and Laine Nooney, "How the Personal Computer Broke the Human Body," *Vice*, May 12, 2021, https://www.vice.com/en/article/y3dda7/how-the-personal-computer-broke-the-hum.

9   Here, I've tried to build on Grace Kyungwon Hong's and Jodi Melamed's work on race in a postwar liberal milieu, where race shifts from an epidermal *condition* to an *attitude* toward structural conditions. Grace Kyungwon Hong, *Death beyond Disavowal: The Impossible Politics of Difference*, Difference Incorporated (Minneapolis: University of Minnesota Press, 2015); and Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (Minneapolis: University of Minnesota Press, 2011).

10 On computer graphics as non-representational, see Jacob Gaboury, *Image Objects: An Archaeology of Computer Graphics* (Cambridge, MA: MIT Press, 2021).